

## **Technical Report 1352**

# **Framework for Understanding Intercultural Perspective Taking in Operational Settings**

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# FRAMEWORK FOR UNDERSTANDING INTERCULTURAL PERSPECTIVE TAKING IN OPERATIONAL SETTINGS

## EXECUTIVE SUMMARY

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### Research Requirement:

The overall goal of this research effort was to develop an understanding of intercultural perspective taking (IPT) in operational settings. To represent this understanding, a framework was developed that describes the processes and influences associated with IPT. The framework was derived from a methodology that leveraged both an extensive review of the literature on perspective taking (PT) across domains and cognitive interview techniques executed with operational forces with deployment experience.

### Procedure:

Researchers began by conducting a detailed review of PT literature across domains. The objectives of the review were to define IPT for this effort, identify relevant features of existing models of PT, discover issues associated with assessing PT quality, and survey individual, relational, and situational variables that have been found or are believed to impact PT quality or propensity. From these findings and a review of the research team's existing archived datasets, the researchers identified relevant IPT themes and candidate individual, relational, and situational IPT influences. The themes and influences guided the development of a tailored critical-decision-method (Klein, Calderwood, & MacGregor, 1989) data collection protocol which was subsequently conducted with U.S. Soldiers who had prior deployment experience. Incidents were elicited that involved participants engaging in challenging interactions with foreign nationals. Questionnaires were administered to collect information regarding participant individual differences. The interviews were coded according to theme and influence presence, and the results informed an empirical investigation in which the candidate themes and influences were evaluated for relevance to operational settings, possible interactions and inter-relations, and ultimately for inclusion in the IPT framework.

### Findings:

Several key themes emerged from the data analysis and literature review. The themes guided the development of the final product of this effort: a framework for understanding IPT in operational environments. The framework comprises six components: Activation, IPT Processes, Target's Perspective (Product), Application, Outcomes, and Reflection. The framework describes the constituents of, and interactions between each component and describes how PT across national boundaries in operational settings (IPT) differs from traditional understandings of PT presented in the literature. A key difference concerns the greater importance of sensemaking processes in IPT to develop an understanding of the target and target group. Another key characteristic of the framework is that it distinguishes precursors to IPT from actual IPT processes and products and IPT outcomes. It is critical to consider these distinctions when modeling IPT to avoid confusion, reduce ambiguity, and maximize its value.

## Utilization and Dissemination of Findings:

The research effort represents a critical primary step in understanding and supporting PT in intercultural operational settings. The framework clearly describes IPT and articulates important aspects of IPT in operational settings. The framework can serve as a common reference for the research and development community to guide and distinguish future efforts. Efforts to promote or assess IPT ability in Soldiers or to increase its propensity in the field need to clarify upfront whether they are targeting the enabling precursors to IPT, the actual cognitive IPT process, how IPT is applied operationally, the intended short- and longer-term outcomes of IPT, or post-IPT reflection. As described in the framework, each of the areas involve unique attributes and abilities.

# FRAMEWORK FOR UNDERSTANDING INTERCULTURAL PERSPECTIVE TAKING IN OPERATIONAL SETTINGS

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## **FRAMEWORK FOR UNDERSTANDING INTERCULTURAL PERSPECTIVE TAKING IN OPERATIONAL SETTINGS**

“Our true political aim, for which we are using military force, is to influence the intentions of the people. This is an inversion of industrial war, where the objective was to win the trial of strength and thereby break the enemy’s will. In war amongst the people the strategic objective is to capture the will of the people and their leaders, and thereby win the trial of strength”  
(Smith, 2008, p. 279)

“The conflict will be won by persuading the population, not by destroying the enemy”  
(Hall & McChrystal, 2009, p. 1)

### **Introduction**

With dramatic changes to the nature of warfare and military conflicts, non-kinetic aspects of warfare have become increasingly critical to mission success. Smith (2008; see quote above) described these changes in the nature of warfare as a movement from industrial war to war amongst the people. These two types of warfare are more typically referred to as regular and irregular warfare (e.g., Salmoni & Holmes-Eber, 2008). Whereas regular warfare involves a confrontation between two fairly well defined armies with a set of quantifiable military assets, irregular warfare involves a less well-defined adversary (e.g., civilian insurgents). While typically possessing little or no traditional military assets and training, adversaries in irregular warfare have the resources necessary to develop low-tech, improvised weaponry and the will to sustain conflict for extended periods of time. Irregular-warfare missions (e.g., counterinsurgency and stability and transition) often involve working closely with foreign nationals in order to achieve mission success. While not limited to irregular-warfare conflicts, the ability of U.S. military personnel to understand, interpret, predict, and persuade individuals from a variety of cultural backgrounds is even more critical to achieve success in these types of missions.

Cross-cultural competence (3C) refers to the knowledge, skills, and abilities (KSAs) that individuals need to operate successfully in unfamiliar cultures (Abbe, Gulick, & Herman, 2007; Selmeski, 2007). The U.S. Department of Defense (DoD) has a strong interest in better understanding 3C in operational settings, as well as in developing assessment tools and training methods to enhance the 3C of U.S. military personnel as future operations are likely to be focused in foreign environments. Researchers have developed a variety of approaches and a number of models of 3C in operational settings (e.g., McCloskey, Behymer, Papautsky, Ross, & Abbe, 2010; McDonald, McGuire, Johnston, Selmeski, & Abbe, 2008). While the KSAs proposed as critical for 3C vary across models, virtually all of them recognize the importance of understanding the thoughts, feelings, and other mental states of individuals who belong to cultural groups different from the perspective taker (i.e., intercultural perspective taking, IPT) (Gabrenya, Griffith, Moukarzel, Pomerance, & Reid, 2012). Given that the interest of this effort is in IPT in the military domain (i.e., during deployments in foreign nations), “cultural groups” in this report refers almost primarily to national culture. The focus is on the perspective taking (PT) process a U.S. Soldier uses when interacting with local foreign nationals during deployment.

In spite of the abundance of research exploring PT in intracultural situations, research exploring IPT is scarce. An improved understanding of how IPT works in operational settings, as well as the individual, relational, and situational variables that impact its activation and accuracy, is critical for the development of appropriate models, assessment tools, and training. U.S. military personnel with strong IPT skills will be better equipped to face the types of missions that are typical in current conflicts (Elkhamri, 2007; McFate, 2005; O'Connor, 2010).

In the first section of this report, the findings from a review of the PT literature are summarized. The section is organized into four subsections: concept, models, quality, and influences. In the second section, an empirical investigation conducted with a sample of U.S. Soldiers is described in detail in order to learn more about IPT in operational settings. The interview protocol and a thematic coding scheme used in the investigation were developed based on the findings from the literature review. Once collected, the interview data were subjected to fragment-level and holistic coding by a group of raters. In the third section, a summary of the results obtained from analyzing the resulting codes is presented. The results include frequencies of occurrence of the IPT themes, correlations between fragment-level and holistic codes, and correlations between a set of potential influences on PT and the IPT themes. In the fourth section, the limitations of the present research are presented and the lessons learned are synthesized into a framework for understanding IPT in operational settings. The report concludes by suggesting directions for future research and summarizing the findings.

## **Background**

An important goal driving the research effort was the existence of a vast research literature on PT that could be leveraged to improve understanding of IPT in operational environments. In order to guide the development of a preliminary framework of IPT and the design of data collection methods for this effort, a large body of literature on PT in monocultural, nonmilitary settings was reviewed. This Background section presents the findings from that review that are most relevant to the research presented in this report.

This section is organized into four primary subsections. The first subsection introduces and discusses the concept of PT (i.e., what is meant by the term PT in this effort). The second subsection introduces some key features of existing models of PT advanced by other researchers to explain how PT works. The third subsection explores issues associated with determining PT quality (i.e., what is good and bad PT). The fourth and final subsection surveys individual (e.g., cognitive ability), relational (e.g., perceived similarity), and situational (e.g., cognitive load) factors that have been linked to changes in PT propensity or quality. At the end of each of these sections, the relevance of the findings to IPT in operational settings is highlighted.

### **Concept: What is Perspective Taking?**

The term PT is used in this effort to refer to the cognitive processes underlying an individual's ability to "get beyond one's own point of view to consider the world from another's perspective" (Epley & Caruso, 2008, p. 299) in order to "understand, in a nonjudgmental way, the thoughts, motives, and/or feelings of a target" (Parker, Atkins & Axtell, 2008, p. 4). For instance, a young clinical therapist who has never experienced a divorce or the death of a close

loved one may need to engage in PT (i.e., understand how a person who has experienced those events thinks and feels) to better help the patient. Even though both the example above and the research literature tend to assume the PT effort will have a positive impact on social interactions, technically speaking PT ends with the understanding of how the other person (target) is perceiving, feeling, or thinking. What an observer does with that information (i.e., whether or how he/she applies it to subsequent social interactions) is not PT per se. Rather, this target-behavior prediction and the generation and selection of appropriate courses of action to achieve the desired outcome (e.g., persuade the target to do or think what you want them to) are considered as consequences or applications of PT in this research effort.<sup>1</sup>

The use of PT in this effort is closely related to (and in some cases virtually synonymous with) what others have called mind reading (Ames, 2005; Apperly, 2011; Ickes, 2003), mind perception (Ames & Mason, 2012; Epley & Waytz, 2010), mentalizing (Frith & Frith, 2006; Meins & Fernyhough, 1999), mental state inference or attribution (Ames, 2004; Zaki & Ochsner, 2011), behavior explanations (Malle, 1999), empathic accuracy (Ickes, 1997; Zaki & Ochsner, 2011), interpersonal sensitivity (Decety & Batson, 2007), theory of mind (Apperly, 2012; Flavell, 2004; Premack & Woodruff, 1978), the other minds problem (Malle & Hodges, 2005), role taking (Selman, 1971), and many more. A detailed comparison with each of these terms or research traditions is beyond the scope of this effort. However, relevant insights from all of these research traditions are incorporated to better understand what PT is, how it works, and how intercultural situations impact its operation.

**Perceptual, affective, and cognitive dimensions of perspective taking.** In line with previous research (e.g., Davis, 1994; Kurdek & Rodgon, 1975), PT is conceptualized as having three dimensions: perceptual, affective, and cognitive. That is, one can talk about what an individual understands about what the target perceives, feels, or thinks under specific circumstances.

**Perceptual perspective taking.** Perceptual PT refers to the process of understanding what a target individual perceives in a specific situation. Perceptual PT has typically been investigated using vision and has often been referred to as visual or spatial PT (e.g., Michelon & Zacks, 2006; Tversky & Hard, 2009). For example, an observer may see a pedestrian approaching a threat (e.g., an armed stranger waiting around a corner) and understand that the pedestrian cannot see the same threat from his/her position (since there is a building blocking his/her line of sight). Although less commonly examined, perceptual PT also occurs in other sensory modalities. For example, an individual may see a fellow traveler listening to music over headphones and understand that he/she cannot hear the message announcing the flight's departure.

Researchers have used a variety of tasks to investigate perceptual PT. Piaget and Inhelder's (1948/1967) classic three mountains task, for example, consists of showing participants a table top model representing three mountains of different colors and supporting different objects (e.g., cross, house). The participant sits at one side of the table, from where he

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<sup>1</sup> While behavior prediction and action selection are not technically PT, they are important for understanding IPT in operational settings. In the research presented later, these aspects will be considered under the umbrella of 'application of PT.' However, in this section, the goal is to delimit the boundaries of PT as a concept.

or she can observe the model. The task requires that the participant imagines how the model would look if a target was sitting (a) at the opposite end of the table, facing the model (and the participant), (b) at the right side of the table from the participant's perspective, facing the model, or (c) at the left side, facing the model. Responses may include reconstructing the scene from the perspective of the target, choosing which of a set of pictures corresponds to a given target's perspective, or choosing which of the three target's perspectives corresponds to a given picture. More recently, Keysar and colleagues developed a more commonly used visual perceptual PT task. In this task, the participant works with a confederate (the "director") to move objects around a vertical array (Keysar, Barr, Balin, & Brauner, 2000). The participant has visual access to some objects that are occluded for the director. He or she receives instructions from the director and must determine to what objects the director is referring, when the director cannot see all the objects that the participant can see (e.g., "does 'move the tape' refer to the roll of adhesive tape or to the cassette tape?"; Keysar, Lin, & Barr, 2003).

**Affective perspective taking.** Affective PT refers to the process of understanding what a target individual is feeling in a specific situation. Affective PT is often labeled as empathy (Batson, 2009), although empathy sometimes goes beyond an understanding of how another person feels and involves a shared affective experience (e.g., feeling the way the target feels; Batson, 2009). The definition of affective PT in this effort does not require that an individual shares the affective experience of the target, but only that he or she understands what the target is feeling. For example, an individual who sees a man storming off after an argument may infer that this man is feeling angry at that moment. Similarly, a different individual who did not witness the argument may see the man's walking pace or his facial expressions to infer his emotional state. As defined in this effort, both of these individuals would be engaging in affective PT.

An example of an experimental task used to investigate affective PT involves showing participants drawings of actors in situations that are expected to evoke certain emotions (e.g., being chased by a tiger) and asking them to report how the actor is feeling (Kurdek & Rodgon, 1975). The key manipulation is whether the actor is displaying emotional expression appropriate to the situation (e.g., fear) or an inappropriate one (e.g., happy). When the actor was expressing an inappropriate emotion and the participant chose the inappropriate emotion as a response, it indicated that the participant was reporting the target's affective response to the situation.

**Cognitive perspective taking.** Cognitive PT refers to the process of understanding what a target individual is thinking in a specific situation. Cognitive PT has more often been labeled mind reading (Ames, 2005; Ickes, 2003), mind perception (Ames & Mason, 2012; Epley & Waytz, 2010), or mental state inference (Ames, 2004). For example, an observer may see a shopper searching her pockets in front of the cashier and infer that she is looking for money to pay for her purchase. Two types of mental states that have been highlighted in the literature are desires (e.g., she wants to pay) and beliefs (e.g., she thinks that there may be sufficient money in her pocket). However, many other mental states (e.g., she likes this store, she intends to hand the money to the cashier) are also possible.

Researchers have developed numerous tasks to investigate cognitive PT. Probably one of the best known tasks is the false belief task (Wimmer & Perner, 1983). In this task, the researcher describes a scenario to the participant in which the protagonist places a personal

possession in a specific location (e.g., a basket) and a second actor moves it into a different container while the protagonist is out of the room. The participant is asked to report where he/she predicts the protagonist will look for the personal possession when he/she returns. The correct response involves reporting the false belief about the location of the object expected from the protagonist, thus ignoring what the participant him/herself knows. The false belief task is one variant of a privileged knowledge task. More recent versions of this task include Keysar's (1994) linguistic PT task, in which participants read scenarios that require them to distinguish their own knowledge from that of an actor in the scenario who does not have access to all of the information. For example, one scenario stated that an actor followed a restaurant recommendation from a colleague and afterward told the colleague, "You wanted to know about the restaurant, well, marvelous, just marvelous" (Keysar, 1994, p. 169). Readers were informed that the restaurant experience had either been bad or had been good. They subsequently had to rate the degree to which the colleague would perceive the comment as sarcastic versus sincere. Thus, the participants had to set aside their own knowledge and take the perspective of the colleague, who, in the scenario, did not yet have the complete information.

Research has provided support for the existence of multiple, distinct dimensions of PT (e.g., Kurdek & Rodgon, 1975). While culture is likely to influence all dimensions of PT to some extent, perceptual PT is expected to be least affected by cultural differences between the observer and the target. Furthermore, cognitive PT is expected to be, relatively speaking, more affected by these differences than affective PT. Given the emphasis on intercultural situations, the cognitive dimension of PT is the primary focus of this effort. In naturalistic settings, however, these dimensions are closely interrelated and cannot be easily separated. For example, understanding what a target is perceiving and/or feeling is likely to be strongly influenced by interpretations of what that target is thinking. Therefore, while cognitive PT is emphasized, affective and perceptual PT are also considered in the review when deemed relevant.

**Perspective taking as a process, rather than a disposition.** As mentioned above, the primary focus is on the cognitive processes underlying individuals' attempts to understand the perceptions, thoughts, and feelings of other people. Another line of PT research, which some have called a dispositional approach (Parker & Axtell, 2001), considers PT as either an individual variable (trait) or a general ability acquired through normal development. The individual variable perspective focuses on exploring the proclivity of a person to engage in PT as an individual variable in general, across situations. The Interpersonal Reactivity Index (IRI; Davis, 1983), for example, is a widely used measure based on research investigating PT as a trait (e.g., Davis, 1994). The IRI assesses the constructs of PT, fantasy, empathic concern, and personal distress. While PT considered as a trait is not the focus of this effort, this line of research is relevant to aspects of this effort and will be considered when appropriate (e.g., individual influences on PT).

**Perspective taking as more than a tool or strategy based on mental simulation.** As mentioned earlier, PT refers to attempts to understand the perceptions, thoughts, and feelings of other individuals. There are many sources of information and strategies that an observer can use to achieve this understanding (Batson, 2009). Some researchers (and many laypeople) define PT only as those instances in which the observer engages in active mental simulation of what it is like to perceive, feel, and/or think the way the person does. When researchers want to manipulate

PT as an independent variable in laboratory settings, they typically rely on mental simulation to manipulate it. For example, researchers have asked observers to imagine a day in the life of a target person, “as if you were that person” (Galinsky & Moskowitz, 2000), before carrying out a specific task. The goal of these research efforts is to explore whether engaging in PT impacts certain outcomes (e.g., stereotype expression or in-group preference). While mental simulation can, and often does, play a role in PT, the definition of PT in this effort is not limited to instances in which active mental simulation is used to understand a target’s perspective. Rather, this research considers the possibility that other strategies may be used in some circumstances. This is consistent with the literature (e.g., Ames, 2004) and, given that this effort focuses on investigating the influence of different factors on PT quality, it would be unwise to arbitrarily constrain PT to simulation based strategies alone.

**Summary and relation to IPT in operational settings.** This section introduced a definition of PT and distinguished its cognitive, affective, and perceptual dimensions. In this effort, PT is conceptualized as a set of cognitive processes that individuals employ to understand other people and as more than a strategy based on mental simulation. In the context of military operations in novel cultural environments, IPT refers to the cognitive processes underlying U.S. military personnel’s attempts to understand the perceptions, feelings, and thoughts of local nationals. Foreign nationals often have very different ways of thinking from those of U.S. military personnel because of their different backgrounds, experiences, and cultures. Comparatively speaking, cognitive PT is expected to be particularly important for understanding IPT, because it is expected to be most affected by cultural differences between observer and target.

## Models: How Does Cognitive Perspective Taking Work?

Models of PT in the literature were reviewed in order to better understand how PT works. The goal in this section is not to present a comprehensive description of PT models, but to identify the key features of existing models that informed the present effort. First, the influential debate between theory theory and simulation theory in the field of PT research is briefly described. Then, the key features identified through the review of the literature are used to organize what was learned from existing PT models.

**Theory theory versus simulation theory.** The publication of Premack and Woodruff's (1978) classic article exploring whether chimpanzees are capable of engaging in PT sparked an increased interest on human PT across a variety of fields. In developmental psychology, this wave of interest fueled a long lasting debate between proposers of two alternate views regarding how humans engage in PT (Carruthers & Smith, 1996). Theory theorists propose that people develop over their lifetime an intuitive understanding of how other minds work and use this theoretical framework to infer the mental states of others from their behavior. This approach is sometimes compared to a scientist developing and testing theories about how the world works (Carruthers, 1996). In contrast, simulation theorists propose that individuals imagine themselves in the other person's situation and use their own reactions and reasoning abilities to determine the mental states of the other person (Gordon, 1996). This debate has continued over decades and, as it is typically the case with these types of debates (e.g., nature vs. nurture), neither side has prevailed. Rather, researchers have acknowledged that both of these theoretical proposals describe important aspects of PT. As a result, recent models of PT tend to be hybrid models that integrate some aspects of each of the two theoretical traditions (Epley & Waytz, 2010).

**Key features of existing models.** This subsection presents a set of key features of existing IPT models that provide insights into the functioning of PT and the choices researchers make when modeling PT. Table 1 shows the list of key features. Each of them will be explained in more detail below.

Table 1

### *Key Features of Existing Perspective Taking Models*

Activation of PT	Sources of Information	PT Processes
Explicit instructions	From the target	Bottom-up
Monetary incentives	<ul style="list-style-type: none"><li>• target behaviors</li></ul>	<ul style="list-style-type: none"><li>• experience sharing and mimicking</li></ul>
Motivation to be accurate	<ul style="list-style-type: none"><li>• emotional expressions</li></ul>	<ul style="list-style-type: none"><li>• simple projection and egocentric anchoring</li></ul>
	From the observer	<ul style="list-style-type: none"><li>• mental stimulation</li></ul>
	<ul style="list-style-type: none"><li>• mental states of observer</li></ul>	<ul style="list-style-type: none"><li>• social inferences</li></ul>
	<ul style="list-style-type: none"><li>• stereotypes</li></ul>	Top-down
	From the environment	<ul style="list-style-type: none"><li>• anchoring and adjustment</li></ul>
	<ul style="list-style-type: none"><li>• social features</li></ul>	<ul style="list-style-type: none"><li>• schema use</li></ul>
	<ul style="list-style-type: none"><li>• physical features</li></ul>	<ul style="list-style-type: none"><li>• stereotyping</li></ul>



**Activation of PT.** Some PT models (Epley & Caruso, 2008; Gehlbach, 2004; Ickes, 1993) explicitly acknowledge the activation of PT as an important part of their model. That is, making an attempt to understand the target's perspective is a requisite for a person to successfully engage in PT. This activation is often described as requiring effort on the part of the observer, but some stimuli (e.g., "seeing a child in pain," Epley & Caruso, 2008) can trigger its activation. Explicit instructions (Epley & Caruso, 2008) and monetary incentives (Klein & Hodges, 2001) can also increase the likelihood that observers activate PT. Ickes and colleagues (2011) emphasized the importance of the observer's "motivation to be accurate" (p. 203). Their research suggests that observers are often less motivated to engage in PT when it is not adaptive or in their best interest. For example, individuals with an avoidant attachment style tend to show little motivation to engage in PT (Ickes, 2011) and people tend to engage in PT more often when opposite-sex targets are attractive than when they are unattractive (Ickes, Stinson, Bissonnette, & Garcia, 1990).

**Sources of information.** Some PT models describe which sources of information observers use to understand the target perspective. For example, Ames (2005) distinguishes between information obtained from the target, which include target behaviors and emotional expressions, and information obtained from the observer, which include the mental states of the observer and stereotypes. Stereotypes have also been referred to, more broadly, as knowledge the observer has about the target (Epley & Waytz, 2010). Stereotypes would be, in this view, one of many types of knowledge about the target. In his model, Nickerson (1999) distinguishes three sources of knowledge about the target: knowledge about what members of the target's group or category think (including stereotypes), knowledge derived from prior experience with the specific target, and a default model about targets in general (see 'Schema use' below for more detail on Nickerson's model). Other researchers have also proposed environmental features (both social and physical) as potential sources of information during IPT efforts (Davis, 2005).

These different sources of information are closely tied to the types of processes in which they are used (see next subsection), but it is important to conceptually distinguish sources of information from processes. One reason for this is that researchers who choose to focus on one source of information over another tend to develop models that emphasize or exclude certain types of processes. Separating sources of information and processes facilitates the discussion of features across models.

**PT processes.** The majority of models of PT focus on processes in which one engages during PT. Different models, however, focus on different subsets of these processes. In this subsection, processes that are most commonly described in PT models are identified. These PT processes are grouped using a distinction that is widely used in perception research: bottom-up and top-down processes (Lewis, Hodges, Laurent, Srivastava, & Biancarosa, 2012). Bottom-up processes begin with perceptual information and the observer draws conclusions about the target's mental states using that information. Bottom-up processes of PT include:

- **Experience sharing and mimicking.** Experience sharing is typically emphasized by researchers interested in the neural basis of PT (Zaki & Ochsner, 2011). There is substantial evidence supporting the idea that, when a person observes a target experiencing a mental state or engaging in an action, brain regions involved in

experiencing that state or carrying out that action are also activated in the observer (Gallese & Goldman, 1998). This “neural matching” (Batson, 2009) is considered one of the PT processes involved in understanding a target’s mental states. The existence of experience sharing is often cited as evidence supporting the simulation theory account (Gallese & Goldman, 1998) and as a process underlying simple and advanced simulation (see next subsection). Epley and Waytz (2010) pointed out that mimicking another person’s behavior can enhance experience sharing. There is also evidence suggesting that mimicking is most common among those with greater propensity or motivation to engage in PT (Epley & Waytz, 2010).

- **Egocentric anchoring and simple projection.** In the developmental literature, extensive research has investigated children’s acquisition of a ‘theory of mind’ (see Flavell, 2004, for a review). When this happens, the child finally overcomes his/her egocentrism, and realizes that there are other minds outside his/her own and that other people may not share his/her mental states. Egocentric anchoring during PT, however, is not something that ends in childhood (Keysar et al., 2000; Epley, Morewedge, & Keysar, 2004). Rather, it continues throughout one’s life and adults just develop the ability to adjust this initial tendency (Epley, Morewedge, & Keysar, 2004; see also Anchoring and Adjustment below). Furthermore, there are instances in which adult observers merely attribute the same thoughts they themselves are experiencing to a target: projection (Ames, 2005). Naïve realism, the belief that one’s attitudes and preferences are not social constructions but correspond to reality, could increase the occurrence of simple projections. For example, if one believes that a large house with a yard is a better place to raise a family than an apartment in the city and assumes others believe it too because it really is better, then one is more likely to project those beliefs onto others and assume they think the same way (Ames & Mason, 2012). Evidence supporting this tendency of human adults to adopt an egocentric perspective first also comes from gaze-tracking data (Keysar et al., 2000). Overall, evidence suggests that adults experience egocentric anchoring (most, if not all, the time) and project (at least sometimes) their mental states onto others. Ames’s (2004) similarity contingency model posits that observers are more likely to engage in projection when they perceive the target to be more similar to themselves.
- **Mental simulation.** Mental simulation as a PT process involves a more sophisticated and effortful form of projection (Ames, 2005). Rather than assuming that the target thinks like oneself, mental simulation involves imagining oneself in the target’s situation and using the resulting experience to infer the target’s mental states (Gordon, 1996). In the case of simulation, the information used to understand the target’s mental states does not originate in an external sensory stimulus (e.g., target). However, the process is considered a bottom-up process because observers still use their own immediate experience as they simulate the target to determine what the target was thinking, feeling, or perceiving.
- **Social inferences.** How social inferences take place is rarely explicitly addressed in PT models. However, most PT models do imply that social inferences play a role in PT. For example, Ames (2005) describes observers as relying on “evidence-based

induction” (p. 158) to draw conclusions about the target’s mental states from his/her behavior and displays of emotion. Research on goal and intentionality inferences suggests that these types of inferences occur automatically and rapidly when observers are faced with human behavior (Malle & Holbrook, 2012). While it is likely that social inference processes are taking place during PT, there has been little integration of these two bodies of literature.

In contrast to bottom-up processes, top-down processes begin with higher level cognitive knowledge about the target and results in conclusions drawn by the observer about the target’s mental states (using that knowledge). Top-down processes of PT include:

- **Anchoring and adjustment.** Some researchers have proposed suppressing one’s self is an important requirement for PT (Bennett, 1979). While self-suppression has been advanced as an ideal process to achieve successful PT, there is no evidence that it is what happens when individuals engage in PT. Rather, most research suggests that individuals inevitably begin with one’s own perspective (i.e., egocentric anchoring) and then use knowledge about how the target is different from oneself to adjust this initial anchor (Epley, Keysar, Van Boven, & Gilovich, 2004). While projection happens automatically, adjustment requires effort. Epley and colleagues suggested that observers carry out this adjustment in a series of small steps until they deem the resulting perspective a plausible estimate of the target’s perspective.
- **Schema use.** Nickerson’s (1999) model technically also begins with one’s own perspective and involves adjustment. However, Nickerson’s model proposes the use of a “default model of random other’s knowledge” (p. 740) as the starting point or anchor when an observer encounters a new target. This default model (or schema) is based on the observer’s own knowledge, but it is developed by the observer for understanding what a generic target is likely to know by taking into consideration what is unusual about the observer. While that default schema is technically a source of information, not a process, Nickerson also proposes a process by which this schema is used (in combination with other sources) during PT. According to Nickerson, when an observer encounters a target, he/she uses this default model as a starting point and integrates what one knows about the target’s group and what one has learned from prior interactions with the specific target to create an initial model of that target. This initial model is then modified based on information obtained (bottom-up) while interacting with the target.
- **Stereotyping.** Stereotyping involves drawing conclusions about the target’s mental state based exclusively on what one knows about the group or category to which the target belongs (Lee, Albright, & Malloy, 2001). Ames’s (2005) similarity contingency model proposes that observers shift between projection and stereotyping as a strategy to understand targets’ mental states. Observers tend to use projection when the target is perceived as similar to oneself and stereotyping for more dissimilar targets.

While multiple processes have been proposed across PT models, the focus of researchers has typically been limited to only a few of these at a time. Today, most researchers advocate for

some sort of hybrid model that combines bottom-up and top-down processes (Ames & Mason, 2012; Epley & Waytz, 2010; Zaki & Ochsner, 2011). Neural evidence reinforces the idea that these are separate systems using separate neural networks (e.g., Mitchell, Macrae, & Banaji, 2006) and observers shift from one process to another depending on the circumstances (e.g., similarity with the target, how much one knows about the target). These models appear successful at explaining the data, but it is unclear to what extent any or which of these processes can be used simultaneously. This information, however, is important to understand PT in naturalistic settings because it is not possible to examine a subset of processes in isolation.

**Summary and relation to IPT in operational settings.** In this section, the simulation and theory accounts of PT were briefly described to provide some background for PT models. Then, a set of key features of existing models were identified and used to organize the lessons learned from reviewing PT models. These themes included: activation of PT, sources of information, and PT processes, which were divided into bottom-up and top-down processes. Bottom-up processes are more closely related to the simulation account of PT, whereas top-down processes are more closely related to the theory account. Overall, the concept of IPT is more consistent with a theory account of PT and it is likely to rely heavily on top-down processes. The premise of IPT is that knowledge about the target's culture will be used during PT. A strict view of simulation theory, in which one is transported into the target's situation without adjustment, is unlikely to work when attempting to understand a target from a culture that is very different from one's own. However, there is no reason why a hybrid approach could not be at play. As Gordon (1996) describes in his defense of simulation theory, it is not oneself that is transported into the target's situation during simulation, but oneself transformed into someone who would behave as close to the target as possible. To the extent that observers have sufficient knowledge about the target, it is conceptually possible that they could apply that knowledge to run simulations to approximate the target's mental states.

One issue that is not addressed in these models, and that is at the heart of IPT, is how observers develop the necessary information to input into top-down processes. The reviewed models described stereotypes, other differentiating knowledge about the target, or knowledge from prior interaction with the target as something that was given. While the assumption that this knowledge is a given in one's own culture may be warranted, developing the necessary knowledge and schemas to input into top-down processes in intercultural situations is arguably one of the greatest challenges to IPT. While PT models do not provide guidance into how the development of this knowledge happens, researchers have addressed some of these questions in related fields. For example, Osland and Bird's (2000) concept of cultural sensemaking is an attempt to explain how an observer can develop better knowledge and schemas than those provided by cultural dimensions. A model of IPT in operational environments will likely need to include at least some sensemaking processes (see the Quality of the perspective taking process subsection below for more detail on these processes).

### **Quality: What Is 'Good' and 'Bad' Perspective Taking?**

Determining the quality of higher cognitive processes (e.g., decision making, spatial navigation, trait judgment) is always challenging, and PT is no exception. In this section, the frequently applied distinction between process and product is used to frame the discussion on

how to determine the quality of PT. The quality of the product refers to the extent to which the output of the PT (the perspective taken) is the 'right' perspective. This is most often investigated as a question of accuracy. The question of quality of the process refers to the extent to which what the observer did to reach the product (the perspective taking process) was appropriate or not, given the circumstances. The rationale behind drawing the distinction in the first place is that one could obtain the 'right' product following the 'wrong' process, and vice versa.

**Accuracy of the perspective taken.** While discussing the accuracy of personality judgment, Funder (1995) discussed an important distinction regarding how researchers view accuracy. The same issues are present when one is concerned with the accuracy of PT. When applied to PT, what Funder called the pragmatic approach would view PT as a means to the end of being successful in the social world. According to this approach, then, determining the accuracy of a PT effort involves evaluating whether it resulted in success in achieving the desired goal (i.e., social interaction). The constructivist approach would view the internal states (e.g., thoughts) of the target as "social constructions" (Funder, 1995, p. 652) that can vary between target and observer, as well as across observers. To determine the accuracy of a PT effort, the constructivist approach relies on agreement between the target and observer or among observers; that is, the more observers agree about what the target is thinking, feeling, or perceiving, the more accurate the perspective. Finally, the realistic approach would view the internal states (e.g., thoughts) of the target as real characteristics of the target. In his realistic accuracy model, Funder (1995) advocated this latter approach to trait-judgment accuracy. In Funder's view, the ability to achieve successful trait judgments depends on properties of the environment and properties of the observer. Properties of the environment (including the target individual) include the extent to which the target's behavior is relevant to the trait that is being judged and the extent to which the (relevant) behavior is available to the observer. Properties of the observer include the extent to which the observer is able to detect the target's (relevant) behavior and the extent to which he/she is able to utilize that information to judge the target's trait. Funder's model can be helpful to organize influences on PT and, in fact, it has been used to organize findings in the PT literature (Ames & Mason, 2012).

One way researchers have approached the investigation of the accuracy of the perspective taken is by creating situations (i.e., experiments) in which definitive information is known, so they can compare the participant's PT product to the 'correct' product. This strategy is relatively straightforward when investigating perceptual PT because the experimenter typically has control over the configuration of physical stimuli on which the participants will be tested (see, for example, the tasks described under Perceptual perspective taking in the Concept section earlier in the report). Similar strategies have been used to investigate affective and cognitive PT. For example, the affective and cognitive PT tasks described in the Concept section also rely on creating an experimental situation in which there is an objectively right and wrong answer in order to measure the accuracy of the participant's PT product. While informative, this approach to PT accuracy is limited by the need to focus on relatively simple mental states or emotions and carry out the experiment in controlled laboratory situations.

Some researchers have developed ingenious paradigms to investigate PT accuracy in more naturalistic situations. For example, Ickes' (2003) empathic-accuracy paradigm creates a situation in which a social interaction occurs naturally (e.g., in a waiting room before an

experiment) and then the researcher asks the two participants to report what they thought were the mental states of the other person. While no objective facts can be established in this paradigm, the researcher can use the level of agreement between the self-reported mental states (by the target) and those the observer attributed to the target. That way, the self-reported mental states can be used as facts against which to compare the observer's responses. This paradigm is consistent with a constructivist approach to PT accuracy.

Other research has adopted a more pragmatic approach to PT (Funder, 1995) by investigating the effect of PT on other outcomes. For example, at the group level, some researchers have examined the effectiveness of using PT for reducing stereotype expression and in-group preference (Galinsky & Moskowitz, 2000; Weyant, 2007). Other researchers have demonstrated that PT instructions reduced prejudice and improved the positivity of social interaction (Todd, Bodenhausen, Richeson, & Galinsky, 2011). At the individual level, researchers have examined the effects of PT on self-relevant thoughts, providing further support for the active role of the self in PT (Davis et al., 2004).

**Quality of the perspective taking process.** It is expected that particular processes will be linked to greater accuracy. However, accuracy research alone does not always provide information about the quality of the process. Many factors contribute to the final PT product and, in operational settings, the types of mental and emotional states are likely to be more complex. Under these circumstances, it is often difficult to ascertain the facts for the PT product and it is often valuable to investigate the process leading to the outcome as a way to assess the quality of the PT effort. This process approach, however, still requires that one specifies what a good PT process is, which is far from straightforward. Existing research has explored the extent to which the processes followed by individuals seem to follow those predicted by their preferred model in controlled, laboratory situations. For example, Ames (2004) investigated differential projection and stereotyping use for in-group and out-group targets, finding support for his similarity contingency model; that is, greater perceived similarity with the target was related to more projection and less stereotyping, and the opposite was true for greater perceived dissimilarity. Given that getting “beyond one's own point of view to consider the world from another's perspective” (Epley & Caruso, 2008, p. 299) is one of the defining characteristics of PT, researchers using privileged knowledge tasks have used the extent to which participants were able to overcome the “curse of knowledge” (Birch & Bloom, 2007) to assess quality of the PT product.

Virtually no research has explored the quality of PT processes in operational settings. Successful PT in these situations may involve different processes than are typical of simplified, laboratory situations. While part of the challenge of IPT involves how to appropriately use one's knowledge of how others are different from oneself as input to PT processes (e.g., adjustment), many of the issues facing IPT in unfamiliar cultural settings are related to how to develop this knowledge and how to know whether this knowledge is accurate (rather than about how to use it per se). Nickerson (1999) is probably the only PT researcher who has proposed a process (i.e., development and use of schemas) that could at least partially account for how individuals develop a working model of members of unfamiliar cultural groups.

Based on previous research experience investigating decision making in naturalistic settings and the review of archived data, sensemaking processes are also important to understand IPT in unfamiliar cultures. Sensemaking processes describe “how people create, use, and manipulate organizing structures” (Klein, Moon, & Hoffman, 2006, p. 91). Similarly, the way one begins with one’s own perspective in PT, Klein and colleagues’ data/frame theory of sensemaking posits that observers begin with their own perspective or frame (a concept virtually synonymous with schema). New data are used to elaborate or question one’s own perspective or frame and questioning sometimes results in reframing, whereby one’s initial frame is found lacking and alternatives are sought to replace it. Osland and Bird (2000) proposed a model of cultural sensemaking to explain how individuals develop an understanding of complex cultural environments. Interestingly, they proposed a more bottom-up approach to sensemaking than the one proposed by Klein et al. (2006). Specifically, Osland and Bird proposed that sensemaking begins in the environmental cues by “indexing context,” then the observer “makes attributions” to relate those data to previous experiences and existing schemas, and finally “selects a schema” that can help the observer know how to act within that cultural context.

Researchers have used a variety of methods (e.g., Klein, Calderwood, & MacGregor, 1989; Vicente, 1999; Woods, 1993) to learn about how people develop useful knowledge in real-world situations and apply the knowledge they gain from this process to achieve their goals. One approach to the assessment of “rigor” in sensemaking (Zelik, Patterson, & Woods, 2010) was particularly relevant to this effort. Zelik et al. proposed eight processes, based on findings from prior empirical work, that captured how intelligence analysts reduced the risk of “shallow analysis” (p. 65). In the context of IPT in operational settings, shallow analysis would be akin to drawing oversimplified conclusions about a target or target group (e.g., stereotypes). That is, an observer develops knowledge of poor quality about the target or target group, given the specific relevant behavior and cultural information that was available to him/her. The proposed ‘good’ sensemaking processes were:

- **Hypothesis exploration**, which involves generating multiple explanations for available data, as well as some level of evaluation of their relative potential.
- **Information search**, which involves actively seeking additional data to complement the information initially available.
- **Information validation**, which involves critically examining multiple, independent sources of information to assess their likely validity (e.g., based on agreement level).
- **Stance analysis**, which involves critically examining the characteristics of the sources in order to understand how their perspective may have influenced the information.
- **Sensitivity analysis**, which involves an awareness of the ways in which the analysis product is limited and how changes in source validity could affect the product.
- **Information synthesis**, which involves integrating the collected data into a cohesive product based on relationships among data, rather than just listing the components.

- **Specialist collaboration**, which involves seeking out experts and integrating expert input into the product.
- **Explanation critiquing**, which involves examining the analysis process as a whole while actively searching for pitfalls and other limitations.

The sensemaking processes proposed by Zelik et al. (2010) and Klein et al. (2006) can be valuable tools when engaging in IPT in new and unfamiliar cultures. Therefore, they should be considered when exploring IPT in operational settings and may provide insight into the quality of the IPT process beyond what traditional PT processes can provide.

**Summary and relation to IPT in operational settings.** In this section, the process-product distinction was used to organize the discussion about PT quality. When discussing PT product accuracy, a set of approaches to accuracy research were first introduced and then some of the ways in which researchers have investigated accuracy of PT products were briefly summarized. When discussing the quality of the PT process, a summary of the approaches used by PT researchers to investigate quality was presented first, followed by a discussion of the relevance of sensemaking research for evaluating the quality of the IPT process.

It is not surprising that most existing research on PT accuracy approaches it from a realistic or constructivist approach. After all, PT per se excludes the types of outcomes that the pragmatic approach considers critical to determine accuracy. The interest in IPT in operational settings is a practical one, however, and one could argue that accuracy should be approached using a pragmatic approach. Some research suggesting that people can be motivated to be inaccurate (Ickes, 1993) raises the question of whether pragmatic accuracy can, at times, be in conflict with other types of accuracy. For the purposes of this effort, this raises the question of whether IPT accuracy is always better for success in operational settings. If the motivation to be inaccurate or to not activate PT is ever useful (e.g., it could threaten a useful relationship with a local leader), one could easily imagine a divergence between pragmatic accuracy and other types of accuracy. Given the emphasis on mission effectiveness, the existence of this divergence favors the use a pragmatic approach for IPT in operational settings.

Related to the importance of pragmatic accuracy, what needs to be known about the target typically depends on the purpose of the IPT effort in operational settings (i.e., what the IPT product will be used for). Different aspects of the target's perspective are likely to be important depending on whether the goal of the Soldier is to persuade the target to destroy poppy fields, gather information regarding a recent assassination, build a relationship with a local leader, or gain the hearts and minds of a village. The question of PT product accuracy does not examine what the purpose of the PT effort is or the level at which one needs to understand a target's perspective to be successful.

Finally, it is important to note that, when one is thinking about outcomes in operational settings, there are proximal and distal outcomes to a Soldier's actions. If pragmatic accuracy of a PT process is measured by the short-term, proximal outcomes, there is a chance that a second-order, long-term, distal outcome may be neglected. For example, a Soldier tasked with clearing a



road may be successful at this task by yelling at individuals, pushing them, and threatening with a weapon, but fail to realize that the resulting anger may motivate some of these individuals to act in a hostile way toward U.S. forces in future encounters. Despite the aforementioned issues suggesting that a pragmatic approach may be more appropriate to assess IPT quality, this approach also poses some conceptual challenges. Given the definition of IPT in this effort, which does not currently include behavior prediction or action selection, using the outcome of the interaction as the criterion for accuracy involves using an accuracy measure that is far removed from the actual object of research. The topics of pragmatic accuracy and the breadth of the definition of IPT in operational settings will be revisited in the Discussion and Conclusions section.

### **Influences: Which Variables Impact Perspective Taking?**

The last section of the literature review details variables that have been hypothesized as potentially impacting PT. Some of the variables are expected to affect a person's motivation to engage in PT, whereas others are expected to affect the process or product of PT. The identified variables are organized into three types: individual, relational, and situational variables. Table 2 shows the full list of variables under these three types. Research exploring how each of them may impact PT is presented below.

Table 2

#### *List of Potential Influences on Perspective Taking*

Individual Variables	Relational Variables	Situational Variables
Gender	Familiarity and similarity	Power and interdependence
Cognitive ability	Group membership	Observer's affect
Cognitive and attributional complexity	Cooperation versus competition	Time pressure and cognitive load
Self-reported PT and self-esteem	Conflict	
Openness to experience		
Emotional regulation		
Experience		

**Individual variables.** Researchers have identified a number of individual differences related to PT. Some of these individual variables are associated with motivation to understand other people, facilitating the detection of cues to another person's perspective, whereas other variables relate to better utilization of those cues once detected. Individual variables described in this section include: gender, cognitive ability, cognitive and attributional complexity, self-reported PT and self-esteem, openness to experience, emotional regulation, and experience.

**Gender.** Research on the role of gender in PT provides mixed conclusions. Women tend to score higher on self-report measures of PT and empathic concern (e.g., Davis, 1980). One experiment showed that women were more accurate in identifying the thoughts and feelings of target individuals (both male and female) as reported by targets (Thomas & Fletcher, 2003).

However, other research using similar methods has not always replicated the finding (e.g., Ickes et al., 1990). When individuals observe and judge specific targets, usually in video, research often fails to find a significant female advantage (e.g., Letzring, 2008; Marangoni, Garcia, Ickes, & Teng, 1995; Zaki, Bolger, & Ochsner, 2008). However, there is also no evidence of reversed gender effects in these research efforts, with males performing better.

***Cognitive ability.*** Evidence for the role of cognitive ability in PT is also mixed. Cognitive ability is unrelated to the propensity to engage in PT as indicated by self-report (Davis, 1983; Realo et al., 2003). Some research indicates that cognitive ability coorelates with the accuracy of social perceptions, whereas other research does not. Murphy and Hall (2011) found a small positive relationship between general intelligence and accuracy in emotion decoding. Davis and Kraus (1997) also found support for the positive relation between cognitive ability and PT after reviewing published research. However, other research has found no relationship with interpersonal sensitivity (Carter & Hall, 2008) or nonverbal recall accuracy (Hall, Murphy, & Schmid Mast, 2006).

***Cognitive and attributional complexity.*** Cognitive complexity refers to a range of constructs a person can differentiate when understanding or describing people (O’Keefe, Shepherd, & Streeter, 1982). Cognitive complexity has also been linked to PT skills (Davis & Kraus, 1997; Hale & Delia, 1976). Counselors who scored higher on a personal construct based measure of cognitive complexity showed greater PT in conflict scenarios (Kline, Pelias, & Delia, 1991). Attributional complexity (i.e., a person’s interest in, and preference for, complex explanations of behavior over simpler ones) has also been linked to higher levels of empathy, as rated by peers (Fast, Reimer, & Funder, 2007).

***Self-reported PT and self-esteem.*** Self-reported PT appears to have no noteworthy relationship with actual PT. Several research efforts have found no relationship between self-reported PT ability and actual accuracy (Marangoni et al., 1995; Realo et al., 2003), and a recent meta-analysis found a very small relationship between perceived ability and actual accuracy in detecting and interpreting interpersonal cues (Hall et al., 2006). One possible explanation for the lack of relationship may be that self-reported PT measures measure one’s interest in PT, rather than how successful one is at it (Myers & Hodges, 2009).

Although examined in only a few research efforts, self esteem may play a role in PT. Self-report measures of PT show a positive relationship with self esteem (Davis, 1983). When students were asked to take the perspective of an elderly man, participants with higher self-esteem evaluated elderly people more positively. One explanation for these findings is that because the PT process involves the application of self-representations to representations of another person, positive self regard will be extended to the target of PT (Galinsky, Ku, & Wang, 2005). By the same process, any negative self-regard would also be extended to the target of PT; thus, only individuals with a positive self-concept would view another person more positively as a result of taking his/her perspective.

***Openness to experience.*** Research suggests that openness to experience is related to PT. In a Dutch sample, researchers found that, of the Big Five traits, openness shared the largest relationship with PT, with agreeableness showing a smaller correlation (De Corte et al., 2007). In

an adolescent sample, openness correlated with PT to a greater degree than other traits, but this was true for males only (Jolliffe & Farrington, 2006). Females' PT was also related to openness, but to a greater degree with agreeableness.

***Emotional regulation.*** Gehlbach (2004) hypothesized that greater emotional regulation would be positively related to PT propensity and accuracy in conflict situations. However, he presented no direct empirical evidence to support this relationship.

***Experience.*** Some research suggests that certain life experiences contribute to PT. Contact with outgroups (Aberson & Haag, 2007) and participation in multicultural and diversity education (Gurin, Nagda, & Lopez, 2004) were predictive of self-report measures of PT. Additionally, the large body of research on intergroup contact reveals that PT and empathy are important mediators of the effect of contact on prejudice (Pettigrew & Tropp, 2008).

***Relational variables.*** Relational variables are variables describing an observer's relationship to the target. There have been several relational variables that have been proposed to affect PT in the literature, including: familiarity and similarity, group membership, cooperation versus competition, and conflict.

***Familiarity and similarity.*** Familiarity and contact between the observer and target improve PT, providing more information about the target than that available in a specific situation. In addition, greater familiarity and previous interactions can provide opportunities for feedback on one's judgments, which improves accuracy (Marangoni et al., 1995). In one research effort, researchers found that male friends made more accurate empathic judgments than male strangers (Stinson & Ickes, 1992). Judgments of friends relied not only on information communicated within the interaction, but also on other knowledge.

However, an ongoing relationship between perceiver and target can influence the process of PT in a way that does not always produce increases in accuracy. Perceivers are more likely to show egocentric biases in taking the perspective of a friend versus a stranger (Savitsky, Keysar, Epley, Carter, & Swanson, 2011). In married couples, empathic accuracy decreased as the length of the marriage increased, because the partners' thoughts and feelings diverged more over time (Thomas, Fletcher, & Lange, 1997). This finding suggests that projection may have played a role in partners' judgments, leading them to make more accurate judgments when their own thoughts and feelings converged with those of their partner, and less accurate judgments when they diverged.

Though some research demonstrates it can sometimes cause errors, projection can lead to greater accuracy when the perceiver and target are similar. In a work context, participants reported engaging in PT more with colleagues they perceived to be similar (Williams, Parker, & Turner, 2007). In research on personality judgments, projection was associated with greater accuracy, and judges tended to rely more on projection when they actually were more similar to the target (Letzring, 2010).

***Group membership.*** Group membership also affects both the process and accuracy of PT. As when taking the perspective of familiar individuals, perceivers also rely on projection at the

group level. Perceivers judge in-groups to share more of their own traits and characteristics than out-groups (Ames, 2004; Robbins & Krueger, 2005). Ames and colleagues (Ames, 2004; Ames, Weber, & Zou, 2012) provide evidence that the in-group/out-group difference in projection is due to perceived similarity. Recent research supports this argument, showing that inducing a similar mindset increases projection (Todd, Hanko, Galinsky, & Mussweiler, 2011), raising the possibility that PT for out-group members may have an advantage in terms of accuracy. However, in this research, the targets' perspectives were known or easily accessible, and did not involve any group stereotypes. It is unclear what happens when the target's perspective is not indicated by immediate situational evidence. In addition, recent research indicates that the benefits of a difference mindset for intergroup PT may be limited (Ames, Mor, & Toma, 2013).

As with interpersonal familiarity, other research focusing on the accuracy, rather than the process, of social perception across groups reveals mixed findings. A meta-analysis on the accuracy of emotion decoding found greater accuracy within cultures and ethnicities than across (Elfenbein & Ambady, 2002). In addition, greater familiarity was associated with greater accuracy, and minority group members were more accurate than majority group members. In contrast, an investigation of empathic accuracy found no intracultural advantage (Soto & Levenson, 2009).

***Cooperation versus competition.*** Little research has directly examined the effects of cooperation and competition on PT, but several research efforts have tested the effects on related processes. Cooperation leads to greater projection of one's own characteristics to both real and laboratory out-group (Riketta & Sacramento, 2008) and to individuals (Toma, Yzerbyt, & Corneille, 2010), suggesting that cooperation may boost the motivation to engage in PT.

Instead of looking at the outcomes of cooperation and competition, other research efforts have manipulated PT under both cooperative and competitive conditions. This research demonstrates that the relational benefits of PT are limited to cooperative conditions, suggesting that even if PT were attempted more often in competitive contexts, it may be unhelpful or even counterproductive. One research effort found that although PT reduced egocentric judgments in competitive resource allocation dilemmas, it increased self-serving behavior (Epley, Caruso, & Bazerman, 2006). Under conditions of cooperation, PT reduced self-serving behavior. Similarly, another research effort of negotiations found that PT increased agreements when joint gains were possible, but inhibited agreements in distributive negotiations in which tradeoffs between own gain and counterpart's gain were forced (Trötschel, Hüffmeier, Loschelder, Schwartz, & Gollwitzer, 2011). Although these findings do not directly test whether competition decreases PT, they do indicate that PT can have counter-intuitive egocentric effects when parties have a competitive relationship.

***Conflict.*** Research on the effects of conflict on PT is somewhat mixed. Yet, there are different levels and types of conflict (see Jehn, 1997), and these types may differentially impact PT. Researchers have argued that conflict in a cognitive or intellectual form encourages PT in order to resolve uncertainty associated with the controversy (Tjosvold & Johnson, 1977; Tjosvold, Johnson, & Fabrey, 1980). When faced with conflict that arises from a difference of opinion, individuals engage in deeper processing, to which PT contributes. However, when conflict is of an interpersonal or intergroup nature, research suggests that PT may be inhibited.

When judging a family conflict, participants had difficulty taking both parties' perspectives and instead tended to take sides and show favoritism (Frantz & Janoff-Bulman, 2000). In a visual-spatial PT task, participants had more difficulty taking the perspective of individuals with whom they experienced high conflict, whether the conflict had naturally occurred in the case of a romantic breakup or was induced in the laboratory (Steins & Wicklund, 1996). At a group level, conflict leads to greater psychological distancing – individuals emphasize the differences between themselves and the out-group (Riketta, 2005). Taken together, this line of research suggests that social or emotional conflicts inhibit PT and cognitive or task conflicts can potentially facilitate PT under some conditions.

**Situational Variables.** Situational variables describe the observer's circumstances when interacting with the target. Some situational variables have been proposed to influence PT, including: power, observer's affect, and time pressure and cognitive load.

**Power and interdependence.** A recent series of experiments provided compelling evidence suggesting that high power reduces PT (Galinsky, Magee, Inesi, & Gruenfeld, 2006). After remembering and writing about an experience in which they had power over other people, participants were less likely to take another person's visual perspective, less likely to correct for their own perspective on a privileged knowledge task, and less accurate in interpreting nonverbal expressions of emotion. These findings were consistent with some earlier research on dyadic laboratory interactions, which assigned individuals to a higher-status or lower-status position and found greater motivation for PT in the lower-status dyad members (Tjosvold & Okun, 1979). Power is closely related to interdependence (Epley & Waytz, 2010) and other research has contributed convergent evidence suggesting that interdependence increased participants' tendency to seek out information about another's perspective, relative to conditions of independence or dependence (Tjosvold & Fabrey, 1980).

In contrast to the research described above, other research has found that higher power is associated with more empathy and greater empathic accuracy (Hall, Halberstadt, & O'Brien, 1997), as well as greater interpersonal sensitivity. One explanation for these effects is that power enhances goal orientations (Côté et al., 2011) and thus enhances an individual's existing goal set. In both state manipulations and trait measures of prosocial orientation, prosocial orientation was associated with greater empathic accuracy, but only for higher-power individuals (Côté et al.). Thus, whether power increases or decreases PT depends on other conditions.

**Observer's affect.** Experiencing positive affect causes individuals to engage in more flexible thinking, but also in more heuristic and holistic thinking (Frederickson, 2001). In responding to a vignette about an individual experiencing distress over a work situation, individuals in a positive mood reported more PT with a culturally dissimilar target relative to participants in a neutral or negative mood (Nelson, 2009). Participants in a neutral or negative mood showed more empathy with a target who's mental and emotional states were more culturally consistent with U.S. norms. These findings suggest that observers experiencing positive affect overcome the bias toward activating PT only with similar or familiar others.

In a research effort using judgments based on verbal content, researchers found that negative affect could increase accuracy. Participants induced to feel sad made more accurate

judgments than participants induced to feel happy on a privileged knowledge task. (Converse, Lin, Keysar, & Epley, 2008, Exp. 1). In addition, sad participants made fewer egocentric errors on a visual-spatial PT task than did happy participants (Converse et al., Exp. 2). This research suggests that although positive affect can enhance motivation to take the perspective of dissimilar others, negative affect may be more influential on accuracy. Negative affect may help individuals engage in the effortful processing needed to make accurate adjustments from one's own perspective.

***Time pressure and cognitive load.*** Research has shown that cognitive load causes individuals to rely on automatic processing and default mental schemas, and PT is no exception. Egocentrism tends to increase with time constraints (Epley et al., 2004). Other PT researchers (Gehlbach, 2004; Hodges & Wegner, 1997) also defended a negative link between cognitive load and PT propensity and accuracy. In other research, cognitive load reduced overlap between self and target descriptions (Davis, Conklin, Smith, & Luce, 1996).

**Summary and relation to IPT in operational settings.** This subsection summarized research exploring how individual, relational, and situational variables influence PT. The evidence supporting the influence of most of these variables is limited, with many variables even presenting conflicting evidence. The relevance of many of the factors to intercultural and operational environments is apparent. For example, intercultural situations are almost certainly going to involve less familiar, more dissimilar (at least culturally), and more out-group targets than intracultural situations. Furthermore, military operational settings are more likely to involve conflict than most other settings. The type of mission a Soldier is engaged can often determine the power dynamics between observer and target. For example, missions in which Soldiers are given no decision authority over the target, but mission success depends on what the target does, puts the Soldier in a highly interdependent position where he/she is likely to be motivated to engage in PT. In contrast, highly kinetic operations aimed at securing physical assets are likely to give Soldiers more decision authority and independence from the target to achieve mission objectives.

## **The Present Research Effort**

The present research effort was informed by the review of the literature summarized above and by a review of archived interview data from previous cultural projects. Archived data included simulation interviews (e.g., McCloskey et al., 2010) and cognitive decision method (CDM) interviews (e.g., Rasmussen, Sieck, Crandall, Simpkins, & Smith, 2011) of military personnel with a wide variety of grade levels and cross-cultural experience. While these archived interviews had been collected to investigate other aspects of 3C, they contained information that was relevant to this effort. These interviews were not subjected to systematic analysis, but their content was reviewed and discussed within the team to guide the development of data collection materials for the current research project. Based on the findings from the literature and archived data reviews, a set of themes considered to be potentially important to understand IPT in operational settings was developed and a set of individual, relational, and situational variables (potential influences on IPT) was identified. These themes and variables informed the design of an interview guide and a coding scheme for the data collections described below, which was tailored to learn more about IPT in operational settings. For this research, interviews were

conducted at two Army bases with U.S. Soldiers who had deployment experience. The resulting data were subjected to fragment-level and holistic analyses. Findings from the analyses were used to develop an initial framework of IPT in operational settings.

## **Method**

### **Participants**

A total of 24 U.S. Soldiers were interviewed at two Army bases in the U.S. This sample consisted of 23 men and 1 woman. They ranged in age from 24 to 48 years old ( $M = 38.0$ ,  $SD = 6.1$ ). A total of 21 Soldiers were not Hispanic, 1 was Hispanic, and 2 did not report their ethnicity. In terms of race, a total of 22 Soldiers were white, 1 was Pacific Islander, and 1 reported 'All' as his/her race. Soldiers ranged in grade from SGT to LTC (2 SGT, 7 SSG, 8 SFC, 1 SGM, 1 CSM, 1 1LT, 2 CPT, 1 LTC, and 1 unidentified). They served in the U.S. Army for an average of 15.8 years ( $SD = 6.8$ ), totaling an average of 36.8 months of deployment ( $SD = 17.4$ ). All participants had deployed for at least one tour.

A subset of the participants (10) had recently returned from a tour to Afghanistan, where they were members of a Stability and Transition Team (STT). STTs are involved in training, advising, and mentoring local military and police forces in order to gradually reduce the involvement of U.S. Forces in an area and increase reliance on local personnel and resources. Given the nature of their last deployment, virtually all of these Soldiers had had a relatively intense relationship with at least one Afghan counterpart within the year before the interview. Furthermore, their mentoring/advising role often involved 'influencing' their Afghan counterparts to carry out desired actions, but were not given authority over their counterparts and were strongly discouraged to complete those actions themselves. The remaining 14 participants varied more broadly in terms of their deployment experience, missions during deployments, level of interaction with local nationals, and time since last deployment.

### **Design and Materials**

**IPT themes.** Previous research findings were used to identify a set of themes for a preliminary model of IPT in operational settings. These IPT themes were used as a foundation to shape the current interviews to glean information relevant to IPT and to develop the coding scheme used for the interview analyses. These 23 themes were grouped into 4 categories: content, process, consequences, and purpose (see Table 3). Each theme and category is described below.

**Content.** The content category focused on what the observer said about the internal (mental) states of the target (i.e., the target's perspective). PT content was subdivided into three themes: dimensions, attributions, and second-order PT. Consistent with the conceptualization of PT presented earlier, three dimensions of PT were distinguished: perceptual, affective, and cognitive. Fragments were considered to contain perceptual PT when the interviewee described what the target was perceiving during the incident; that is, visual, auditory, tactile, or other sensory stimuli that the interviewee described as perceived by the target. For example, an interviewee described the targets' perceptions by stating "they see the commander coming in and

out of the checkpoint every day, the AUP commander. So, they know it was him” or “they got to see a lot more than the other interpreters because they were there; they saw me on the phone, on the computer all the time dealing with pay issues for them.” Fragments were considered to contain affective PT when the interviewee described what the target was feeling during the incident; that is, emotional states (e.g., anger, sadness) that the observer describes as experienced by the target. For example, “they were mad and they were swearing revenge” or “I saw him angry when he got beat up.” Fragments were considered to contain cognitive PT when the interviewee described what the target was thinking during the incident; that is, the desires, beliefs, and other mental states (e.g., intention) that the observer describes as held by the target. For example, “he wanted ... to fix the situation, and he didn’t want to come across it as the bad guy” (desire), “I guess in his mind, if I bring this up every single day and resist what’s trying to happen, it’s not my fault because I’m trying to not make it happen, so it’s not my fault” (belief), or “I honestly think he was bluffing” (other mental state).<sup>2</sup>

Table 3

*List of Intercultural Perspective Taking Themes*

Content	Process	Consequences	Purpose
<i>Dimensions</i>	<i>Perspective Taking</i>	Action	Influence
Perceptual	Perspective	Communication	Intelligence gathering
Affective	comparison	Barrier	
Cognitive	Simulation	Objective	
<i>Attributions</i>	<i>Sensemaking</i>	Emotional control	
Personality	Nuanced thinking	PT demonstration	
Environment	Knowledge seeking		
Actions toward the target	Acknowledgement of uncertainty		
Culture/history	Value		
	Critical of self/U.S.		
<i>Second-order PT</i>			

Attributions refer to whether the interviewee described other factors as causing or influencing the target’s perspective. Four types of attributions were distinguished: personality, environment, actions toward the target, and culture/history. Fragments were considered to contain personality attributions when the interviewee described stable traits of the target as influencing the target’s perspective. For example, “the commander was very showman, very, you know, ‘I’m the best at everything,’ ‘there’s nothing wrong with us, the Americans owe me’ kind of deal” or “Masumkhan was very attentive.” Fragments were considered to contain environment attributions when the interviewee described aspects of the situation or circumstances as

<sup>2</sup> During data collection, cognitive PT was subdivided into three subthemes: desires/goals, beliefs, and other mental states. Given that the distinction did not seem useful (see the Frequency of Occurrence of Themes in Intercultural Perspective Taking subsection below), cognitive PT is presented in this report as a single theme for clarity.



influencing the target's perspective. For example, "he dipped his hands into some illegal activities also. He did have his gravel trucks and things like that. So, that was one of our reasons for thinking that he didn't want any outside assistance." Fragments were considered to contain attribution to 'actions toward the target' when the interviewee described his/her behaviors as influencing the target's perspective. For example, "we'd bring like a case of soda out to him. Just kind of show that we care about him more than just work" or "whenever I would grab the paperwork ... they knew, 'yeah, he's firing somebody.'" Fragments were considered to contain culture/history attributions when the interviewee described aspects of the target's cultural background as influencing the target's perspective. For example,

... all they remembered was blowing their country up. You've got to think, at that point they're 20 to 21 years old and they were 13 or 14 when we attacked their country, so a lot of animosity there ... 17 to 25, they just didn't like us. [They were] the real troublesome age group.

Finally, second order PT refers to instances in which the observer described what the target was perceiving, thinking, or feeling about the observer (and what he/she is perceiving, thinking, or feeling). For example,

... in his eyes, he thought we had lied to him about how long he was going to walk and how long he was going to be out there, when in reality, we told him everything that was going to happen.

**Process.** Components under process focused on what the observer said about how they reasoned during the incident. As briefly introduced in the Quality section, IPT involves both sensemaking and PT processes. The processes examined in the data can also be grouped into those categories. Sensemaking processes included: nuanced thinking, knowledge seeking, acknowledgement of uncertainty, value, and critical of self or U.S. Nuanced thinking refers to the extent to which observers limited themselves to one explanation or considers multiple alternatives. For example,

I was asking [the Afghan Police] what they were wearing, what they drove in, how many people were with them, stuff like that, and they gave me all the information. Basically, trying to figure out on their side, what happened, because all I'd been getting was the [Afghan Army]'s side, which I knew they didn't get along. So, I asked their side, you know, what happened.

Knowledge seeking refers to the extent to which the observer described instances in which he/she asked questions or otherwise sought information to learn about the target's perspective. For example, "'maybe they're not telling us something because somebody made some threats or something, so let's ask them if that's happened.'" Acknowledgement of uncertainty refers to the extent to which the observer expressed doubt or limited understanding of the situation and/or the target perspective. For example, "I had serious doubts that they were ever going to open up, just because of the extent that they shut down with our questions and everything" or "'Come on, we're going back out here again? We were just out here two days ago, and they didn't tell us anything. I don't think they're going to tell us anything today.'"

Value refers to the extent to which the observer described feeling positive, neutral, or negative value towards the target.<sup>3</sup> For example, “they’re a good family, very active in the community and try to help the community to progress” (positive) or “it just seemed like he didn’t want to be there ... it just seemed like he didn’t want to go, he didn’t want to be around us, he didn’t want to do anything” (negative). Critical of self or U.S. refers to the extent to which the observer criticized his/her own perspective or actions or those of the U.S. or U.S. Forces. For example, “I honestly think it’s our fault as the overall American Army because we gave them a lot of equipment” or “I know through some of my training, it may not have been the right way to do it, but I just had to let him know.”

PT processes included perspective comparison and simulation. Perspective comparison refers to the extent to which the observer described how his/her perspective was similar or different to that of the target. For example, “Americans were more worried about the individuals and Soldiers than equipment, and they were more worried about the equipment more than the Soldiers. It was just strange” or “it would be the equivalent of just coming and telling the average American, ‘hey, go pack all your stuff, this week you’re moving to Buffalo.’ ‘I’m not moving to Buffalo.’ ‘Well, then you’re fired.’” Simulation refers to the extent to which the observer used mental simulation to explore hypotheticals or assess the effects of actions. For example, “if I would have stayed, he probably would have stayed all puffed up, and I won’t do it, I’m not going to do it... ‘well, okay, then you’re fired’” or “if the commander was there on the ground, I don’t think this PL [platoon leader] would have acted that way. I think he acted that way because he was kind of the officer on the ground for the Afghan Army at that point.”

**Consequences.** Components under consequences focused on how the observer said the PT outcome impacted the observer’s subsequent behavior during the incident. That is, for what he/she used the product of the PT. Candidate consequences included: action, communication, barrier, objective, emotional control, and PT demonstration. Action refers to the extent to which the product of PT influenced the observer’s subsequent nonverbal behaviors. For example, “they were mad and they were swearing revenge. I brought extra security with me, and I wouldn’t let anyone stand behind me. It was pretty stressful there for a while.” Communication refers to the extent to which the result of the PT process influenced what the observer subsequently said to the target or others. For example, “Hey look, you made these promises to these people. You know, what will it look like if you don’t fulfill your promise?” Barrier refers to the extent to which the result of the PT process resulted in the observer identifying obstacles or challenges that needed to be addressed. For example, “he knew he was right ... and he did not want to do this mission. So, in order to save face ... he had to bring up these points again [every day].” Objective refers to whether the result of the PT process was instrumental to determine how to address obstacles or challenges. Emotional control refers to the extent to which the observer had the need to control his/her emotional reaction and their level of success in control the emotion. For example,

... stuff like that annoyed me. I mean, you’ve got to put that stuff aside...when you talk to him, when you work with him. I mean, it can be a frustrating job... very frustrating.

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<sup>3</sup> Value is presented here because, when the coding scheme was initially developed, Value was considered a process theme. However, it would be more appropriate to consider it a content theme (as reflected in the Framework section).

Sometimes you just got to go alright man, I've got to leave, I'm going. You know, see you tomorrow.

PT demonstration refers to whether the observer communicated the result of the PT process to the target in one way or another. For example,

... we're going to take pictures of you sitting right here and we're going to show it all to your boss and, you know, it's going to be really shaming for you to sit here and not do all of these things that you promised.

**Purpose.** Components under purpose focused on what the observer was trying to accomplish by engaging in PT. Candidate purposes included: influence and intelligence gathering.<sup>4</sup> Influence refers to whether the observer was engaging in PT to influence the behavior of a target. For example, "using the Afghan pride, in order to push, motivate him to go out and do something he really doesn't want to do." Intelligence gathering refers to whether the observer was engaging in PT to get information from the target. For example,

... by seeing how they engaged us after finding out what had been told to us by the members of the community. I was like, 'Oh wow, they're really going to open up. They're going to let us know pretty much whatever we want to know.'

**Fragment-level coding scheme.** The thematic coding scheme was designed to analyze the interview content at the fragment level. As described in the Data Handling and Analysis subsection below, the first author parsed the interviews into fragments based on the relevance of the content for research purposes. For every interview fragment, raters assigned a single code for each of the themes described above. For 21 out of the 23 themes, codes consisted of presence/absence ratings: 1 if the raters considered the theme was present in the fragment, 0 if they considered it was not. For the remaining two themes (Value and Emotional Control), three codes between -1 and 1 could be assigned: 1, if raters considered evidence of positive value or presence of emotional control; 0, if raters considered that value was neutral or emotional control was not involved; and -1 if raters considered that value was negative or there was evidence of the interviewee failing to control his or her own emotions. Inter-rater agreement was ensured by following the process described in the Preliminary Analyses subsection below.

**Candidate differences of PT.** Inspired by the review of the literature, but also relying on instances from archived interviews, a set of candidate influences on PT were identified. These influences were grouped into individual, relational, and situational variables, following the same organization as in the Introduction section. Candidate individual variables included age, amount of time in the region (experience), and Interpersonal Reactivity Index (IRI) score (self-reported PT propensity). Relational variables included the level of cooperation displayed by the target, amount of prior interaction with the target, and liking of the target. A comprehensive set of these variables is presented in Table 4. Some of these variables were elicited through questions in the tailored cognitive interviews, whereas others were measured directly from the answers provided

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<sup>4</sup> Only these two purposes were investigated in this research because of the types of incidents in the data set and the large number of themes in the initial coding scheme. However, purposes are highly dependent on mission type and different missions may have led to a different (or broader) selection of purposes.

in the questionnaire. Both the interviews and the questionnaire are described in more detail below and full versions are presented in Appendixes A (interview protocol), B (deployment/cultural experience), and C (questionnaire).

Table 4

*List of Candidate Differences on IPT Examined in the Present Research*

Individual Variables	Relational Variables	Situational Variables
Gender	Cooperation/competition	Threat to safety
Age	Subjective assessment of	Emotional charge
Grade	relationship	Stress
Years of service	Target liking	Fatigue
Number of deployments	Prior interaction with target	Multitasking (cognitive load)
Number of months deployed	Understand role of target	Decision authority
Number of foreign languages		Respected by U.S.
Level of fluency		Respected by target's culture
Interpersonal Reactivity Index (IRI) score		Interpreter use
Amount of time in region		
Familiarity with local culture		
Prior interaction with locals		

**Tailored cognitive interviews.** Interviews for this effort were developed following the critical decision method (CDM; Klein et al., 1989). CDM interviews are designed to gain a better understanding of the cognitive processes underlying performance within a specific domain. CDM interviewers typically elicit one or more challenging incidents from a practitioner and use these critical incidents to probe the perceptual cues, strategies, and cognitive processes underlying performance differences within that domain (see Crandall, Klein, & Hoffman, 2006, for a more detailed description of CDM interviews). In order to collect data to guide the development of an IPT model and gain insight on the factors impacting its occurrence and effectiveness, interview protocols were tailored to fit the research goals of this effort (see Attachment A for a copy of the interview protocol).

In order to minimize the interviewer's influence over the interviewee's initial account of the incident, explicit mention of the specific goals of the project (i.e., to better understand IPT) were purposefully avoided and IPT-specific probes (described later) were not used until after the interviewee had completed recreating the critical incident in its entirety. Instead, a general probe ('Can you think about a time, in [country], when you were interacting with local nationals (e.g., civilians, local military personnel, local officials) and the interaction was particularly challenging?') was used to elicit incidents in which the participant had the opportunity to engage in IPT. Then, once a promising incident was identified, a timeline of the incident was elicited, and a series of probes were used to get a detailed understanding of the event. Completing the incident reconstruction without probing for IPT allowed the research team to overcome some of

the limitations encountered in archived interviews (e.g., inability to distinguish spontaneous IPT mentions from those in reaction to the interviewer's probes).

During the incident timeline development and deepening, interviewers were tasked with paying special attention to certain markers that indicated potential instances of IPT for later probing. Examples of IPT markers included 'they want,' 'they think,' and 'they don't understand.' The interviewer then used these markers during the following part of the interview to probe specifically about how the participant determined what the foreign national in question was thinking. Examples of IPT probes included 'Why do you think the person did what they did?' 'What made you think they were thinking/feeling/wanted that?' and 'Did you consider any of this at the time?' Following IPT probing, interviewers collected information regarding the relationship with the foreign national and the situation in which the incident took place. Example situational detail probes included 'How many times had you interacted with this person prior to this situation?' 'How well respected by their own people was this person?' and 'What was your general fatigue level at the time?' To wrap up the interview, interviewers asked general questions about the interviewee's cultural knowledge and training. Interviewers also asked them whether any of the things they had learned since the incident would have changed their interpretation and/or actions in a similar situation.

**Questionnaire.** A questionnaire was developed to collect information regarding interviewee's individual variables. The questionnaire had two sections: a Deployment/cultural experience section, and an adapted version of the Interpersonal reactivity index (Davis, 1983).

***Deployment/cultural experience.*** The Deployment/cultural experience section included general demographic questions (e.g., age, gender, race), as well as questions relating specifically to their experience in the Army (e.g., grade, years of service, MOS). Participants were also asked to report their ASVAB General Technical score as a measure of general cognitive ability. In order to collect information regarding their intercultural experience within and outside of their military deployments, there were questions about the location, duration/timeframe, and level of cultural interaction for each of their deployments. Then, participants were asked about foreign-language proficiency and to describe any additional cultural experience they had outside of military deployments. Examples of these types of experiences (provided to participants) included having lived abroad, being a first generation American, and being a naturalized citizen. See Appendix B for a copy of the Deployment/cultural experience section of the questionnaire.

***Interpersonal reactivity index.*** The Interpersonal Reactivity Index (IRI) is a scale developed by Davis (1983) as a way to measure empathy. The IRI consists of 4 subscales: Perspective Taking (PT), Empathic Concern (EC), Personal Distress (PD), and Fantasy (FS). Only the first two of these scales (PT and EC) were used in this research, thus reducing the total number of items from 28 to 14. Due to an unintended mistake, however, an item from the PD subscale ('I sometimes feel helpless when I am in the middle of a very emotional situation') was included in the place of one of the PT items ('I sometimes try to understand my friends better by imagining how things look from their perspective'). Therefore, the adapted version of the IRI used in this data collection had 6 PT and 7 EC items that could be used for analysis. See Appendix C for a copy of the adapted version of the IRI that participants completed.

## **Procedure**

All interviews took place in a classroom setting. Interviews ranged in duration from 1 to 2 hours. Interviewers stayed in the same room throughout all the sessions and participants walked in at 2-hour intervals. Upon participant arrival, interviewers provided a general description of the research effort without explicitly mentioning the IPT focus. Before the beginning of the interview, and as part of the Consent Form process, participants were also asked for permission to audio record the interview. Interviewers then followed the interview protocol (see Appendix A for more detail) and, in the last 10-15 min of the session, participants completed the questionnaire. The reason participants always completed the questionnaire after the conclusion of the interview was to prevent any influence on their interview responses. Once participants completed the questionnaire, interviewers asked participants whether they had any questions and dismissed them. All of the procedures used in this effort were approved by ARI's Institutional Review Board and followed ethical guidelines for collecting, storing, and analyzing data from human participants.

## **Results**

Before describing the analyses and results, a few sample incident summaries are presented to illustrate the nature of the data that were collected during the interviews and subjected to analysis. Then, the procedures followed during interview data transcription and coding are described. Finally, findings from both fragment-level and holistic analyses of those data are presented.

### **Sample Incidents**

The first sample incident involved a U.S. Army officer who was mentoring an Afghan District Police Chief. Specifically, the incident involved a poppy eradication mission to which the Chief had previously agreed. Once at the location, the Chief refused to complete the mission, and the Soldier had to persuade him to proceed. To achieve this goal, the Soldier leveraged what he referred to as the "Afghan pride" to convince the Chief to complete the mission. More specifically, he told the Chief that the Americans would complete the mission for them and acted as if he was taking pictures of them sitting and watching instead of completing their work. When faced with the prospect of having to explain to his boss why they were sitting while the Americans were doing the job for them, the Chief stood up, took charge, and "did a brilliant job."

The second sample incident also involved a U.S. Army officer who needed to persuade his Afghan counterpart without using force or authority. Specifically, he was told that an Afghan 1-star General kept trying to rehire an individual who was fired for engaging in unethical behavior (i.e., stealing). The Army officer's task was to persuade the General to stop his attempts. To achieve this goal, the officer decided to adopt an indirect approach in which, rather than confronting the General about his behavior, he asked the General his opinion regarding a hypothetical case in which a "senior officer is supporting rehiring somebody who did illegal stuff." When faced with this dilemma, the General did say the senior officer should not be doing this, and he himself stopped attempting to rehire that individual. Interestingly, the General also

provided some rationale for his behavior, suggesting that he interpreted the firing differently from how U.S. Soldiers did: “If they’re crooked, they shouldn’t be fired, they should be arrested.”

A third sample incident involved a senior noncommissioned officer (NCO) who was part of a provincial reconstruction team (PRT) in Iraq. After an improvised explosive device (IED) killed a key leader in the area, the PRT was tasked with gathering information from the key leader’s family. The senior NCO described how the family members, while cordial and friendly during the meeting, refused to share any information and even denied what they had already told the Iraqi Police regarding the IED attack. After this initial meeting, the PRT gathered additional information from neighbors, sheiks, and store owners in the area. When they went back to visit the family for the second time, sharing this information with them, and asking them to give their input, the family members began to open up and reported information beyond what the Iraqi Police had provided to the U.S. Army. While the NCO did not direct the conversation with Iraqi leaders (the platoon leader did), he and the platoon sergeant were heavily engaged in the decision making because they had more extensive deployment experience and they helped “guide the platoon leader in the right direction.”

## **Data Handling and Analysis**

**Transcription.** Out of the 24 total interviews conducted, 3 were not recorded because the participant did not give his/ her consent. Interviewers attempted to capture the substance of those interviews through notes, but they were not entered into the fragment-level analysis. Of the remaining 21 interviews, 17 were fully transcribed. The remaining 4 interviews were not transcribed because the interviewer assessed them as not containing enough valuable information for this effort. For example, in one interview, the interviewee reported never having left the U.S. base so no relevant operational incident could be identified; in another interview, the interviewee reported being unable to remember any specifics about any of his/her deployments so a specific incident could not be identified. The resulting 17 fully transcribed interviews were subjected to extensive thematic coding using the thematic coding scheme and procedure described above.

**Data parsing.** Potentially useful fragments were selected from each of the 17 interview transcripts for inclusion in the fragment-level and holistic analyses described below. Since the literature does not advocate a specific procedure to conduct data parsing, an inter-rater agreement procedure was not implemented in this phase. The first author parsed all interviews. All fragments that were deemed to have the potential for PT content were included. Potential for PT content was defined as any instance in which an interviewee explicitly referred to the mental states of foreign nationals or described their behavior without explicit reference to mental states. Parsing resulted in a total of 485 fragments across all 17 interviews. The number of fragments ranged from 14 to 46 per interview ( $M = 29$ ,  $SD = 8$ ).

**Thematic, fragment-level coding.** Once transcribed and parsed, two raters applied the initial version of the coding scheme to the parsed fragments of the first interview collected in this effort. For this first interview, the two raters discussed each of the assigned codes until they reached an agreement. Beginning with the second interview, the two raters coded the interviews separately, shared their codes, and recorded their disagreements. For the second interview, the

two raters only discussed those codes that showed inter-rater disagreement. This process was used to refine both the coding scheme and the raters' understanding of each theme. Beginning with the second interview, levels of interrater agreement were calculated using Cohen's kappa (see Banerjee, Capozzoli, McSweeney, & Sinha, 1999). This measure calculates the proportion of instances in which both raters agreed, correcting for the proportion that would be expected by chance alone. Raters coded independently and resolved disagreements through discussion for an additional two interviews. Using a commonly used scale (see Viera & Garrett, 2005) to interpret kappa, at least moderate agreement ( $\text{kappa} > 0.40$ ) was obtained for 20 out of the 23 themes and fair agreement ( $0.20 < \text{kappa} < 0.40$ ) for the remaining 3. The remaining 13 interviews were split between the two raters for initial coding. However, as a measure of caution (given the 3 categories with less than moderate agreement), each rater reviewed the initial codes for the interviews he/she had not initially coded and was allowed to change the first rater's codes if he/she disagreed with them. While this method may be uncommon (and it certainly demanded more resources than splitting the remaining interviews and assume a reasonable agreement), the resulting codes are guaranteed to show high levels of interrater agreement.

At the end of this process, a set of 'master' codes for all fragments and all interviews were obtained. These master codes were the input for the fragment-level analyses described below. As a note of caution, it is important to note that no inferential statistics were conducted given the nature and limited amount of data. All reported fragment-level results are limited to descriptive statistics and thus provide data trends that warrant further investigation. However, the reporting of these data trends is appropriate for this exploratory effort and the results can provide important insights into what a model of IPT should include and promising directions for future research.

**Individual and situational variable coding.** Some of the variables identified as potential influences on PT were reported during questionnaire completion whereas others were embedded in questions in the interview guide (e.g., 'what was your general fatigue level at the time?'). Two research assistants reviewed all the interviews and extracted the information relevant to each potential influence. As a way to enable fragment-level analyses to examine potential relationships between influences and IPT themes, the information about each potential influence was converted into a numerical value following the guidelines presented in Appendix D. Due to the nature of the semi-structured interview data, some of the data for specific influences were missing. For example, the interviewer may have skipped a specific question in the interview guide or the response was incomplete or too ambiguous. Given these missing values and the same limitations discussed above for the fragment-level codes, it is important that data trends are interpreted with caution as preliminary empirical support for the potential existence of a relationship, rather than as confirmatory evidence.

**Holistic quality ratings.** In order to complement the fragment-level, theme-by-theme coding described above, two senior researchers separately provided a holistic assessment of IPT quality for each of the 17 interviews (i.e., the same parsed fragments that were subject to fragment-level coding). These raters were different from the ones who completed the fragment-level coding and were intentionally given only a very general description of IPT and asked to assess what they considered to be IPT quality: "Assess how good each interviewee was at understanding the perspective of foreign nationals; that is, how they thought, felt, and/or



perceived in the situation at hand.” They were not provided any information about the IPT themes being used for the fragment-level coding. Based on their subjective assessment of IPT quality, the raters were asked to assign a number (0-10) to each interview based on how good they judged IPT to be during that interview, to explain why they assigned that rating, and to highlight parts of the interview that influenced their rating. The raters were further instructed to assess the interviews in a holistic manner, thus avoiding reductionist, additive approaches to determine the final rating. Holistic codes were averaged across raters and this average code was used as a criterion against which to compare the fragment-level codes (see Table 5).

Table 5

*Holistic Quality Ratings*

Participant	Rater 1	Rater 2	<i>M</i>
1	10.0	10.0	10.0
2	3.0	4.0	3.5
3	5.5	8.0	6.8
4	7.5	8.0	7.8
5	8.5	10.0	9.3
6	5.5	1.0	3.3
7	4.0	6.0	5.0
8	5.0	6.0	5.5
9	5.0	N/A	5.0
10	10.0	1.0	5.5
11	1.0	4.0	2.5
12	2.0	5.0	3.5
13	6.5	7.0	6.8
14	6.0	2.0	4.0
15	7.0	10.0	8.5
16	1.0	9.0	5.0
17	8.0	7.0	7.5

Additional qualitative data was elicited from the two raters through oral discussion in which both raters presented (and defended) their understanding of IPT based on the interview data. Three other researchers also reviewed a partial set of the interviews and contributed their qualitative impressions. Converging topics that arose through these in-house discussions will be integrated into the Discussion section.

## Frequency of Occurrence of Themes in Intercultural Perspective Taking

This section begins with a set of preliminary analyses conducted to examine overall trends in terms of frequency with which each theme was coded and range of codes across participants. After that, the results for frequency of occurrence of all IPT themes are presented and the results are summarized by category, adding information from holistic raters when applicable. Correlation data between fragment-level and holistic codes, as well as between the potential influences and both fragment-level and holistic codes, are presented. Given the nature of the statistics and data, it is important to interpret the results with caution and only as exploratory in nature.

**Preliminary analyses.** As a result of fragment-level coding, a code between 0 and 1 was obtained for each theme for all interview fragments.<sup>5</sup> Since the number of parsed fragments varied across interviews (see Data Parsing subsection above), the proportion of fragments for which a code of 1 was assigned for each theme was computed for each interview as a measure of frequency of occurrence (FO) of that theme (in that interview). For example, if ‘Cognitive PT’ was coded as ‘1’ in 8 fragments and as ‘0’ in the remaining 24, ‘Cognitive PT’ would be given a frequency of occurrence of 0.25 in that interview. This process resulted in 25 FOs per interview, one per theme. Below, the mean, standard deviation, and range of FOs for each theme across participants are presented. In order to get an initial sense on the FO data, some high-level descriptive statistics are presented here. The grand mean FO (averaged across all participants and themes) was 0.29 ( $SD = 0.16$ ; range = 0.04 – 0.56); that is, themes were coded as ‘present,’ on average, in 29% of the fragments per interview.

Preliminary analyses examined whether codes showed enough variability across participants to suggest that they may be sensitive to changes across interviews and whether code variability showed a positive correlation with a criterion that is expected to be correlated with the object of research (i.e., IPT quality). To explore the variability issue, the maximum and minimum FO value were recorded for each interview and averaged across interviews. The resulting mean maximum FO was 0.57 ( $SD = 0.17$ ); and the mean minimum FO was 0.07 ( $SD = 0.10$ ). It is worth noting that, the minimum FO was 0 for 13 out of the 23 themes. That is, for these 13 themes at least one participant was assigned all ‘0’s. The mean range of FOs for a theme was 0.51 ( $SD = 0.16$ ; range = 0.15 – 0.86). Overall, codes seemed to show enough variability to hold potential to be correlated with changes across interviews.

The holistic ratings described above were used to explore the criterion issue. If these themes are in any way related to quality of PT, one would expect a relationship between FOs and the holistic ratings provided by researchers assessing PT quality. It is worth noting that the coding scheme had not been developed to compute a single number to each participant by averaging across themes. In fact, not all themes were expected to be positively correlated with better PT (e.g., acknowledgment of uncertainty, personality attributions). However, most themes were expected to be positively related with higher PT quality. Thus, a positive correlation

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<sup>5</sup> The codes for the two themes (Value and Emotional Control) with initial codes ranging from -1 to +1 were converted to values between 0 and 1 before conducting quantitative analyses to prevent them from disproportionately affecting descriptive statistics.

between average FO and holistic rating for each participant was expected if the selected PT themes (as a whole) were positively related to PT quality. Results showed a strong positive correlation ( $r = 0.65$ ) between average FOs and holistic ratings. This correlation was even greater ( $r = 0.72$ ) when the corresponding rankings of participants (rather than the actual code given) were correlated. While purely exploratory, the positive correlation is encouraging, suggesting that the selected PT themes may be capturing similar things to what raters use to assess PT quality when examining the interview as a whole.

In the following subsections, the coding results for each category are examined more closely. When applicable, the fragment-level results are complemented with qualitative observations from raters to gain additional insight into how it seems to contribute to what people subjectively consider IPT. Table 6 shows the mean, standard deviation, and range of FOs for each theme and category. On the far right column, it also displays the correlation that each theme and category showed with the holistic ratings. Following Cohen's (1988) guidelines, correlations with absolute values of 0.50 or above were considered to show a strong relationship, 0.30 to 0.49 to show a moderate relationship, and 0.10 to 0.30 to show a weak relationship.

**Content.** Overall, the frequency of occurrence of PT content showed a strong positive correlation ( $r = 0.74$ ) with holistic ratings. This correlation suggested that the number of references to the target perspective and attributions to internal or external factors is a relatively good marker of the codes assigned by raters when looking at the interview as a whole. When broken into subcategories, dimensions ( $r = 0.52$ ) and attributions ( $r = 0.51$ ) showed strong correlations, and cognitive ( $r = 0.39$ ) showed moderate correlations with holistic ratings. Second-order PT showed a slightly moderate correlation ( $r = 0.37$ ). The fact that second-order PT was not a compound code may have influenced its relatively lower correlation when compared to dimensions and attributions. All four appear to contribute to the relationship between content and holistic ratings.

Results showed similar results for all three dimensions of PT content. As mentioned earlier (see Footnote 3), the initial subdivision of cognitive content into desire/goal, belief, and other mental states (not presented in Table 6) was not supported as useful for the purposes of assessing IPT. Neither desire/goal ( $r = -0.08$ ) nor belief ( $r = 0.25$ ) reached moderate correlations with holistic ratings in isolation; only other mental states showed a strong positive correlation ( $r = 0.54$ ) with holistic ratings. Therefore, the present results suggest that it was not a useful distinction in this context. In terms of attributions, personality ( $r = 0.06$ ) did not show any correlation with holistic ratings. The only attribution that reached moderate levels in isolation was environment ( $r = 0.37$ ). Unexpectedly, cultural attributions ( $r = 0.25$ ) only showed weak correlations with holistic ratings. However, there are at least a couple of factors that may have lowered this number. On the one hand, the coding only captured frequency of occurrence, not quality per se. On the other hand, holistic raters tended to give lower codes to interviewees who they considered to have applied overgeneralized stereotypes. The former applies to all results presented here, but the latter may have had a particular impact on cultural attributions.

Table 6

*Frequencies of Occurrence of Themes and Correlations with Average Holistic Ratings*

		<i>M</i>	<i>SD</i>	Range	<i>r</i>
<i>Dimensions</i>	<b>Content</b>	0.29	0.07	0.15 - 0.39	0.74
	Dimensions	0.29	0.09	0.11 - 0.47	0.52
	<i>Perceptual</i>	0.16	0.12	0.04 - 0.52	0.34
	<i>Affective</i>	0.24	0.17	0.00 - 0.50	0.34
	<i>Cognitive</i>	0.46	0.10	0.27 - 0.64	0.39
<i>Attributions</i>	Attributions	0.33	0.08	0.15 - 0.44	0.51
	<i>Personality</i>	0.15	0.10	0.00 - 0.41	0.06
	<i>Environment</i>	0.53	0.21	0.15 - 0.84	0.37
	<i>Actions toward target</i>	0.45	0.13	0.21 - 0.67	0.26
	<i>Culture or history</i>	0.18	0.18	0.00 - 0.67	0.25
	<i>Second-order PT</i>	0.25	0.13	0.03 - 0.46	0.35
<i>Sensemaking</i>	<b>Process</b>	0.24	0.07	0.12 - 0.34	0.49
	<i>Nuanced thinking</i>	0.17	0.13	0.00 - 0.46	0.48
	<i>Knowledge seeking</i>	0.13	0.12	0.00 - 0.39	0.11
	<i>Acknowledgement of uncertainty</i>	0.30	0.17	0.00 - 0.62	-0.08
	<i>Value</i>	0.44	0.13	0.21 - 0.61	0.74
	<i>Critical of self/U.S.</i>	0.05	0.05	0.00 - 0.15	0.47
<i>PT</i>	<i>Perspective comparison</i>	0.17	0.10	0.00 - 0.33	0.19
	<i>Simulation</i>	0.20	0.14	0.00 - 0.44	0.18
	<b>Consequences</b>	0.35	0.09	0.22 - 0.48	0.34
	<i>Action</i>	0.30	0.14	0.08 - 0.56	0.02
	<i>Communication</i>	0.41	0.15	0.19 - 0.67	0.22
	<i>Barrier</i>	0.49	0.22	0.10 - 0.81	0.07
	<i>Objective</i>	0.31	0.17	0.04 - 0.63	0.34
	<i>Emotional control</i>	0.53	0.06	0.40 - 0.67	0.26
	<i>PT demonstration</i>	0.04	0.09	0.00 - 0.35	0.57
	<b>Purpose</b>	0.23	0.12	0.00 - 0.52	0.29
	<i>Influence</i>	0.36	0.19	0.00 - 0.67	0.23
	<i>Intelligence gathering</i>	0.09	0.15	0.00 - 0.58	0.20

**Process.** Overall, frequency of occurrence of PT process showed a moderate to strong positive correlation ( $r = 0.49$ ) with holistic ratings. However, when explored in detail, it is apparent that the occurrence of all processes is differentially related to these ratings. When explored in isolation, value ( $r = 0.74$ ) showed a very strong correlation with holistic ratings, suggesting that whether the interviewee shows positive or negative affect towards the target is a good marker of how holistic raters will assess PT. Besides value, only two other process themes showed moderate-to-strong correlations: nuanced thinking ( $r = 0.48$ ) and critical of self/U.S. ( $r = 0.47$ ). However, given the overall low level of occurrence ( $M = 0.05$ ) and the limited range of the codes (0 – 0.15) for critical of self/U.S., the results should be interpreted with particular care.

Unexpectedly, perspective comparison ( $r = 0.19$ ) and knowledge seeking ( $r = 0.11$ ) showed a weak correlation with holistic ratings. Perspective comparison, knowledge seeking, and nuanced thinking were all spontaneously mentioned by holistic raters when asked to describe the criteria behind their assigned codes. One possible explanation for this divergence in results is that the type of nuanced thinking that both fragment-level and holistic raters coded (e.g., generation of alternative hypotheses) may be more easily captured using frequency of occurrence than perspective comparison or knowledge seeking. Holistic raters mentioned both good and bad instances of perspective comparisons, but typically considered an interviewee's tendency to generate more hypotheses or explanations for an event as positive. In other words, raters tended to consider both the type of information they sought and the nature of the questions they asked. Holistic raters also reported using the extent to which the interviewees attributed Western-like perspectives to targets when they assessed the quality of their IPT. That is, interviewees using Western ideas (e.g., "if you don't work, you don't get paid or you get fired") to understand intercultural targets were considered to show poorer IPT. This ethnocentric anchoring (i.e., a cultural variant of egocentric anchoring) was not captured in the coding scheme, but it appears to be an important process in a model of IPT.

**Consequences.** Overall, frequency of occurrence of PT consequences showed a moderate positive correlation ( $r = 0.34$ ) with holistic ratings. However, when explored in detail, it is apparent that the occurrence of all consequences is differentially related to holistic ratings. The two consequences that showed highest correlations were PT demonstration ( $r = 0.57$ ), which showed a strong correlation, and objective ( $r = 0.34$ ), which showed a moderate correlation. While the results of PT demonstration should also be interpreted with care, given its low occurrence ( $M = 0.04$ ), it seems reasonable that when interviewees directly communicate the product of their PT to the target, this is considered positively when assessing PT. Regarding the objective theme, holistic raters also reported instances of interviewees using the product of their PT to "craft a strategy" or "change their approach" as positively affecting their rating. The prediction or forecast of a target's behavior was also mentioned by fragment-level raters as an application of PT that was not covered by the coding scheme. While the use of PT to help control one's emotional responses was only weakly correlated ( $r = 0.26$ ), one of the instances highlighted by one of the holistic raters seems illustrative:

I know I prefer not to hold hands, and I told Masumkhan that. I said, 'In my culture, I don't do that. Men don't touch other men in that way. It's just that way with us.' But, you know, just as a sign of, I guess, solidarity with him, if I needed him to do something, that

was my way of grabbing his attention, grab his hand and lead him out of the meeting and say, ‘Hey, brother, we need to talk about this.’

**Purpose.** Overall, FO of purpose showed only a weak to moderate positive correlation ( $r = 0.29$ ) with holistic ratings. In hindsight, it is not surprising that the correlation is weaker for purpose than it is for content and product because the purpose of the mission is further removed from the need to engage in PT and should have less influence on PT quality. However, holistic raters did report the type of incident and mission as an important situational influence on PT. Specifically, raters described how it was difficult to rate IPT irrespective of the specific incident or mission. In certain missions, such as a security detail, IPT was not seen as necessary for accomplishing the mission and the quality of PT in which interviewees engaged was poorer. An additional purpose that fragment-level raters described as important was learning about the target or improving one’s understanding of the target.

**Integration of findings across IPT themes.** Overall, correlation levels seemed lower for categories that appeared more removed from the object of research (i.e., IPT). However, the strong and moderate-to-strong correlations found for content and process suggest that the fragment-level coding, in spite of its limitations, captured similar aspects to the holistic ratings. Another component that raters mentioned as important was the extent to which interviewees showed reflection on their IPT process and product. Raters considered this metacognitive theme to be closely related to learning from experience. While it was not included in the initial set, it appears that a Reflection theme may be useful to understand IPT.

## **Influences on Intercultural Perspective Taking**

Given the large number of potential influences explored in this research, the results for each one are not presented. Instead, some of the data trends among influence types (i.e., individual, relational, and situational) are described. Initial analyses explore how changes in these variables correlate with both average fragment-level codes and holistic codes. Then those influences that show particularly strong correlations are examined further. Whenever possible, fragment-level trends are complemented with qualitative observations. Given the limited data, it is important to consider these results as exploratory in nature and avoid drawing strong conclusions.

**Individual variables.** When examining the correlations between individual variables and PT codes, the only variable that showed moderate to strong correlation with both fragment-level and holistic average codes was PT propensity (as measured by the IRI). IRI scores showed a strong correlation ( $r = 0.53$ ) with average holistic codes and a moderate correlation ( $r = 0.38$ ) with average fragment-level codes. Analyses also explored how IRI scores correlated with the FOs of different theme categories (i.e., content, process, consequences, and purpose) separately. Interestingly, IRI scores showed a strong correlation with FO of PT content ( $r = 0.64$ ), but virtually no correlation with process ( $r = -0.06$ ), consequences ( $r = 0.06$ ), or purpose ( $r = 0.09$ ). This trend suggests that the overall correlation is mostly driven by a relationship between the FO of content and IRI scores. When examined at the theme level, only content about beliefs ( $r = 0.58$ ) and second-order PT ( $r = 0.53$ ) showed strong correlations with IRI scores.

Especially for PT content, there were some unexpected negative correlations. For example, number of deployments ( $r = -0.37$ ), number of foreign languages ( $r = -0.37$ ), amount of time in the region ( $r = -0.40$ ) showed moderate negative correlations with PT content. The reason behind this negative trend is unclear at this point. However, it is interesting to note that, while number of foreign languages showed a moderate negative correlation with PT content, level of fluency (among those who reported foreign languages) showed a moderate positive relationship ( $r = 0.40$ ) with PT content. Regarding cognitive ability, it is worth noting that virtually no officer reported their ASVAB score and, therefore, results on cognitive ability should not be extrapolated beyond the NCO sample. See Table 7 for a complete list of correlations for individual variables.

Table 7

*Correlations Between Individual Variables and PT Codes*

	Content	Process	Conseqs	Purpose	Avge - Fragment	Avge - Holistic
Age	0.05	-0.33	0.16	0.21	0.16	0.06
Grade	-0.13	-0.16	0.30	0.16	0.01	0.03
Years of service	-0.09	-0.31	0.22	0.31	0.11	0.02
Number of deployments	-0.37	0.09	0.24	0.17	0.01	-0.19
Months deployed	-0.11	0.16	0.45	0.34	0.27	-0.14
Number of foreign languages	-0.37	-0.31	-0.23	0.03	-0.28	-0.05
Level of fluency	0.40	-0.17	0.05	-0.13	0.13	-0.22
IRI score	0.64	-0.06	0.06	0.09	0.38	0.53
ASVAB	-0.11	-0.05	-0.09	0.28	-0.06	0.00
Amount of time in region	-0.40	0.11	0.09	0.29	-0.18	-0.32
Familiarity with culture	-0.10	0.16	-0.10	-0.03	0.04	0.00
Prior interaction locals	-0.09	0.42	0.08	0.13	0.11	0.12

**Relational variables.** Cooperation ( $r = 0.59$ ), (positive) subjective assessment of the relationship ( $r = 0.51$ ), and liking of the target ( $r = 0.51$ ) all showed a strong positive correlation with average fragment-level codes. Similarly, cooperation ( $r = 0.56$ ) and (positive) subjective assessment of the relationship ( $r = 0.58$ ) showed a strong positive correlation with average holistic codes, whereas target liking ( $r = 0.39$ ) only showed a moderate correlation. All of these results are consistent with the importance of these factors for IPT.

Interestingly, the remaining relational variables (i.e., understanding the role of the target,  $r = -0.05$ , and amount of prior experience with the target,  $r = -0.05$ ) showed virtually no correlation. In fact, amount of prior experience with the target showed a moderate negative correlation ( $r = -0.41$ ) with PT content. These results were unexpected, given that these relational variables were expected to capture familiarity with the target (i.e., how much the observer knows about the target) and that was expected to be an important influence on PT. A closer look reveals a potential limitation of the collected data: only 6 out of the 17 interviewees had any experience with the target and, of those, 5 had 6 months or less. The relatively short prior experience and limited variability in the data may have hindered our ability to detect any trend. It is noteworthy that 5 of the 6 interviewees with some prior experience came from the subsample of participants who were members of stability and transition (STT) teams during their most recent deployment. Prior experience with the target was highly dependent on the type of mission, suggesting that investigating its impact on PT may require more incidents in STT-like missions. When the correlation between relational variables and the FOs of different theme categories were explored, cooperation had a strong correlation with PT consequences ( $r = 0.59$ ), but only moderate with the remaining categories. Subjective assessment had a strong correlation with purpose ( $r = 0.63$ ) and a moderate correlation with consequences ( $r = 0.49$ ), whereas the correlation for liking is moderate for both consequences ( $r = 0.46$ ) and purpose ( $r = 0.46$ ). See Table 8 for a complete list of correlations for relational variables.

Table 8

*Correlations Between Relational Variables and PT Codes*

	Content	Process	Conseqs	Purpose	Avg - Fragment	Avg - Holistic
Cooperation/competition	0.40	0.47	0.59	0.43	0.59	0.56
Subjective assessment of relationship	0.34	0.30	0.49	0.63	0.51	0.58
Target liking	0.19	0.14	0.46	0.46	0.51	0.39
Prior interaction target	-0.41	0.15	0.18	0.18	0.01	-0.05
Understand role of target	0.10	-0.18	0.41	0.24	0.29	-0.05

**Situational variables.** Threat to personal safety ( $r = -0.54$ ) showed a strong negative correlation with average fragment-level codes and a moderate negative relationship ( $r = -0.38$ ) with average holistic codes. Similarly, emotional charge showed a moderate correlation for both ( $r = -0.34$ , for fragment-level codes;  $r = -0.33$ , for holistic codes). How respected the target was by the U.S. ( $r = 0.53$ ) and by the local populace ( $r = 0.52$ ) was positively correlated with holistic (but not fragment-level) codes. Unexpectedly, stress and competing tasks (i.e., cognitive load) showed a positive correlation with both fragment-level ( $r = 0.60$  for stress;  $r = 0.93$  for cognitive load) and holistic codes ( $r = 0.39$  for stress;  $r = 0.57$  for threat).



Threat to personal safety was a situational variable that was highlighted by holistic raters as particularly influential. For example, one interviewee described an incident in which he was accidentally shot at by Iraqi troops and showed a complete lack of interest in knowing why the target may have shot at them in that incident. Instead, his response was limited to yelling, shaking, and reprimanding the target which, of course, resulted in a low holistic code. However, raters keenly pointed out that in the same interview, the interviewee also showed signs of his capability of engaging in thoughtful IPT under less intense situations. For example, talking about farmers engaging in potentially suspicious activity (e.g., digging in the middle of the night), he said:

A lot of times ... they were legit, it was easier to work at night in the summer 'cause a lot of times the guys would pump to irrigate; they would irrigate the fields. So, obviously... if you think about it, why not work at midnight when it's maybe 85 degrees rather than working in the middle of the day when it's like 120 degrees. So, a lot of times, that's what they would do. Sometimes they had second jobs. They'd be in the city during the day and do the day job. Then they'd come home and still have to work the fields at night.

Another interviewee demonstrated the potential to engage in 'good' IPT in other parts of the interview, but, during the main incident, in which he was facing the prospect of having to fight 500 Iraqis with only 7 fellow Soldiers, his willingness to engage in PT seemed seriously limited:

I don't remember the conversation, because you've got to remember at that point, I'm not worried about what they're doing. That's called tunnel vision. I can't focus on what they're doing. Because this situation has escalated, I have to focus on everything but that.

Given the importance of many of these factors, the type of mission is likely to influence the motivation Soldiers will have to engage in IPT. Deployments during peace time periods or to countries with which the U.S. does not have a conflict are also likely to result in more motivation and opportunities to engage in PT with cooperative targets. See Table 9 for a complete list of correlations for situational variables.

**Integration of findings across influences.** Overall, trends across influences show a greater number of strong correlations for relational and situational variables than for individual variables. However, this difference should be interpreted with caution since other dispositional variables such as cognitive and attributional complexity or openness to experience were not investigated in this effort. Of the measured individual variables, only IRI scores (i.e., self-reported PT) showed a consistent positive correlation with average PT codes. In addition, some unexpected negative correlations for PT content were found. As described above, number of deployments, number of foreign languages, amount of time in the region all showed moderate negative correlations with PT content. Relational variables suggested a positive relationship between average PT codes and cooperation, liking, and positive subjective assessment of the relationship. Finally, situational variables suggested that threat to personal safety and (negative) emotional charge were negatively related to average PT codes. Surprisingly, multitasking and stress appear to show positive relationships with average PT codes. Based on the comments from both fragment-level and holistic raters, the inclusion of a theme addressing the extent to which

observers reflect on their PT process and product seems promising. Overall, this exploration of potential influences suggests that many of these variables show relationships with PT themes and categories. Thus, consideration of these variables is critical to be able to interpret the results of research on IPT in operational settings.

Table 9

*Correlations Between Situational Variables and PT Codes*

	Content	Process	Conseqs	Purpose	Avge - Fragment	Avge - Holistic
Threat to safety	-0.65	-0.05	-0.47	-0.42	-0.54	-0.38
Emotional charge	-0.09	-0.06	-0.28	-0.38	-0.34	-0.33
Stress	0.17	0.51	0.50	0.61	0.60	0.39
Fatigue	-0.08	0.52	-0.26	-0.06	-0.09	0.30
Multitasking	0.21	0.67	0.77	0.77	0.93	0.57
Decision authority	-0.32	-0.51	-0.17	-0.05	-0.26	-0.30
Respected by U.S.	0.13	0.49	0.28	0.19	0.26	0.53
Respected by target's culture	0.06	-0.15	0.13	0.47	0.17	0.52
Interpreter use	-0.01	0.51	0.15	0.24	0.20	0.27

## Discussion and Conclusions

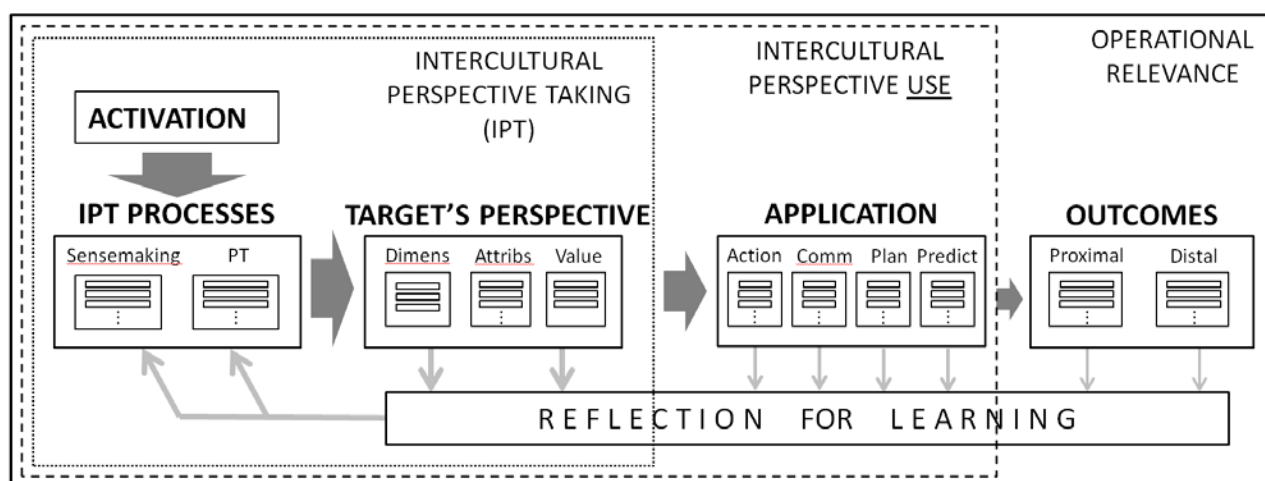
While it is difficult to observe and measure IPT as it occurs in the field, the innovative approach to data collection and analysis used in this research effort has enabled some inroads into understanding IPT in operational settings. Convergent results across fragment-level and holistic ratings reinforce the value of the findings. The combination of a bottom-up (trees) and a top-down (forest) approach to analyzing the data also allows insights at different levels of abstraction. Strong correlations between average fragment-level and holistic codes, for example, suggested that the themes selected for fragment-level coding were capturing similar things to what holistic raters used when assessing interviews as a whole. When it comes to IPT themes, correlation levels were lower for categories (e.g., purpose) that were more removed from the IPT process. Certain themes (Acknowledgment of Uncertainty) seemed unrelated to IPT as judged holistically, but for the most part, the results are consistent with the overall framework, which was developed based on the literature and archived interview data. In terms of influences, the overall trend was for relational and situational variables to show higher correlations with average fragment-level and holistic codes than individual variables. As expected, self-reported IPT (individual), cooperation, liking, and positive subjective assessment (relational) showed overall positive correlations with average ratings. Furthermore, threat to personal safety and negative

emotional charge (situational) showed negative correlation trends. However, a few influences showed unexpected patterns. For example, variables associated with greater experience (e.g., amount of time in the region) had fair (fragment-level) and moderate (holistic) negative correlations with average ratings. Stress and cognitive load (multitasking) also showed an unexpected moderate to strong positive correlation with average ratings. These results are difficult to explain with the data at hand. However, overall trends support the value of the selected IPT themes both when used as an aggregate (average) measure and when divided into smaller components (at least at the category level, support for specific themes was inconsistent).

This section synthesizes the findings into a framework for understanding IPT in operational settings. Then, some of the limitations of the present data and challenges inherent to this topic of research are discussed. Finally, directions for future research and conclusions are presented.

### A Framework for Understanding Intercultural Perspective Taking in Operational Settings

Lessons learned from the literature review and from empirical data were synthesized into a framework for understanding IPT in operational settings. This framework attempts to capture and organize important IPT themes to provide an initial characterization of IPT in operational settings. The goal of this framework is to provide researchers and practitioners with a ‘lens’ to help them parse naturally occurring instances of IPT in order to better understand them. The framework also provides some clues into the differences between PT and IPT, as well as between IPT in operational settings and in controlled situations. Finally, the framework can be instrumental in suggesting directions for future research. The framework has six components: Activation, IPT Processes, Target’s Perspective (Product), Application, Outcomes, and Reflection. Figure 1 presents a graphical representation of the framework. Each component is explained in more detail below.



*Figure 1.* A framework for understanding IPT in operational settings. The graphical representation shows all six components of the framework, as well as boxes enclosing key distinctions to consider when examining IPT in operational settings.

**Activation.** Both in the literature and in the data collected for this effort, many factors impacted whether an activation of PT occurs or not. Among individual variables, propensity to engage in IPT can influence whether someone activates IPT in a specific situation. Relational and situational variables, however, can have a more drastic impact on activation. One of the most obvious situational variables is threat to personal safety (e.g., when being shot at by Iraqi troops). When one's personal safety/survival is at risk, priorities shift to more tactical concerns (and emotions run too high) so IPT is typically not activated. Another related factor that seems to be negatively related to activation is emotional charge. It is worth noting that, in the cases encountered in the data collected for this research, the emotional charge was always a negative emotion (e.g., anger). Two relational variables that also influenced activation were cooperation and target liking. A cooperative and/or liked target is more likely to elicit PT activation than a competitive and/or disliked target.

Holistic raters in this effort also commented on another situational variable that appears important: mission type. Missions with objectives that involve physical assets (e.g., securing a building, clearing a road) are less likely to activate PT than those in which the mission objective is directly linked to persuading or building relationships with local nationals. This finding is akin to research in the literature showing that explicit instructions impact PT activation (Epley & Caruso, 2008), because the commander's guidance can specifically include references to IPT: "The conflict will be won by persuading the population, not destroying the enemy" (Hall & McChrystal, 2009, p. 1). Another interesting aspect of the types of missions in the data collected for this effort was that they often involved power or interdependence. That is, in many of the missions (e.g., STT missions), the Soldiers had no decision authority whatsoever, but were required to be successful by convincing the target to do something (e.g., to not re-hire an individual). Since mission success for the Soldier is dependent on persuading the target to do what is needed, motivation to activate PT is high.

**IPT processes.** IPT processes refer to how observers attempt to understand the perspective of an intercultural target. In intercultural operational settings, Soldiers have at least minimal information about the target's culture, but it is typically very limited when compared to the knowledge they have about their own culture. The big challenge of IPT then is to know how to think about that information, how to complement it, what additional information to seek and where, how to develop an understanding for IPT, and how to use the newly acquired knowledge during IPT. Models of PT (see Models section) have traditionally focused on intracultural situations and, as a result, they have been less concerned with the process of developing schemas to interact with targets. However, in intercultural situations, the information available to the observer is often insufficient and it is critical for a framework of IPT to also include processes involved in making sense of complex, ambiguous information (e.g., cultural cues from target and environment). Thus, IPT processes were divided into sensemaking and PT processes.

**Sensemaking processes.** Sensemaking processes, in this framework, refer to how observers use incomplete, ambiguous, complex data to develop a working understanding of the target and target culture that can be used for their IPT processes. This working understanding (i.e., the final product of the sensemaking processes) becomes part of the information in the observer that is used as input for PT processes. Sensemaking processes include: multiple-hypotheses generation, information seeking, hypothesis testing, and nuanced thinking. The

observer does not need to use all of these every time, but greater use of these processes in intercultural situations is expected to be positively correlated with IPT quality. However, there is more to all of these processes than whether an observer uses them or not (i.e., occurrence). While fragment-level results did not provide consistent support for all of these sensemaking processes, those that were mentioned by holistic raters were included as important for IPT in operational settings.

Individual variables such as cognitive ability and cognitive flexibility are expected to have at least a moderate positive impact on the quality of sensemaking processes. Relational variables, such as familiarity and similarity, are likely to be critical for these processes. When the target is completely new, unfamiliar, and very dissimilar, sensemaking is more challenging, whereas when a target is well-known to the observer and/or the cultural background is relatively similar to the observer, sensemaking is easy (or if taken to the extreme, even unnecessary). Given that high-quality sensemaking requires effort and time, it is likely that situational variables (e.g., time pressure) could result in less exhaustive sensemaking processes.

**PT processes.** PT processes refer to how observers use the working understanding of the target and target culture to understand the target's perspective. It is likely that the same PT processes proposed by existing PT models (see Models section) are at play in IPT (maybe with the exception of simple projection). In fact, Nickerson's (1999) model is likely to be a good approximation of the PT processes that take place in operational settings. That is, in addition to the working understanding of the target culture derived through sensemaking, the observer is likely to use his or her "default model" of targets in general and the knowledge he or she has acquired about the specific target from previous interactions. IPT processes include: experience sharing, egocentric (and ethnocentric) anchoring, mental simulation, social inference, adjustment, schemas, perspective comparison, and stereotypes.

In terms of influences, individual, relational, and situational variables are likely to affect different processes differently. For example, higher scores in Davis' (1983) fantasy scale are likely to be positively related to an individual's proclivity to use mental simulation. In terms of relational variables, greater similarity with the target is likely to facilitate experience sharing, egocentric anchoring, and mental simulation, whereas targets that are unfamiliar and dissimilar from the observer are likely to result in stereotyping (Ames, 2004) or, to the extent that the observer has developed a working understanding of the target from sensemaking, adjustment and use of schemas. Situational variables, such as cognitive load and time pressure, are expected to facilitate more automatic processes (e.g., egocentric anchoring) over more effortful ones (e.g., schema use).

**Target's perspective (product).** As a result of the processes described above, observers develop an understanding of what the target is thinking, feeling, and/or perceiving (i.e., the target's perspective). When examining the product of IPT, one can distinguish between perceptual, affective, and cognitive dimensions of the target's perspective, as well as the observer's attributions of these states to different sources, such as the target's stable traits, aspects of the immediate situation, actions of the observer toward the target, or cultural background. While all of these attributions are possible both in PT and IPT, the quality of IPT is likely to be related to how attributions to cultural background are integrated into the product.

Holistic raters mentioned instances of applying a clearly Western mindset (e.g., “if you don’t work, you get fired”) to an intercultural target as a sign of poor IPT. Another aspect of the target’s perspective that appeared to strongly influence the assessment of holistic raters was value. Raters appeared to rate positively valued target’s perspectives as indicating better IPT, probably as a sign of the observer overcoming his or her ethnocentric anchoring. However, another possibility, suggested by reviewing archived interviews with more experienced Soldiers, could be that even more advanced IPT would produce target’s perspectives that are more neutral (rather than more positive). Regardless, value is another aspect to consider when examining the target’s perspective. The influences of individual, relational, and situational variables on the IPT product are expected to occur through influencing the processes mentioned above and, therefore, will not be discussed further at this point.

**Application of the target’s perspective.** As mentioned earlier, by definition, IPT ends with the understanding of the target’s perspective. When interested in operational settings, however, it is important to capture how this newly acquired perspective is applied to predict what the target is likely to do or to guide one’s subsequent plans, actions, and/or communications in future interactions. The application of the IPT product is expected to be highly dependent on the mission and other situational variables present at the time. The same product (e.g., target is hiding information) is likely to be used in different ways during a disaster relief, peaceful mission to Haiti than during the interrogation of a suspected terrorist in a conflict zone. However, the present data did not allow these issues to be explored in depth as it was beyond the scope of the project.

**Outcomes.** Outcomes are not IPT per se and, in fact, can be far removed from it. However, it is an important aspect to consider when assessing IPT quality in operational settings. Outcome, in this framework, refers to the extent to which the mission was successful. When examining outcomes in operational settings, it is important to distinguish proximal, first-order outcomes (e.g., success in the interaction with the target) from distal, second- or third-order outcomes (e.g., impact of interaction on other individuals in the area, the broader mission, or the conflict at large). It is clearly challenging (if not impossible) to get a complete picture of the outcomes and the extent to which IPT contributed to these outcomes (which is likely to be small for a single instance of IPT). Hypothetically, the Soldier could do everything right, use PT in accomplishing mission objectives, and the mission might still be unsuccessful. For example, the resources to sustain the change were not available or the next unit was unable to maintain good relationships. Given all the other variables that influence outcomes, caution must be exercised when assessing the quality of PT by examining mission success. However, it is advisable to obtain information about outcomes to assess pragmatic accuracy in operational settings. Future data collections will need to include methods and sources beyond interviews with Soldiers to gather the relevant information to characterize the outcomes. While strong links should not be expected, different missions (e.g., security detail vs. persuading a local leader) should be expected to result in different patterns of relatedness between PT accuracy and outcome.

**Reflection for learning.** An important aspect of IPT quality in operational settings is the extent to which observers somehow reflected on their PT process and outcome to improve their skills. While an early version of the coding scheme included reflection as a theme, raters could not reach reasonable levels of agreement during early fragment-level coding and it was

eliminated before the code was applied to all interviews. However, both holistic and fragment-level raters mentioned reflection as an important consideration when reporting their qualitative observations.

**Intra- versus inter-cultural perspective taking.** This effort aimed at improving our understanding of intercultural PT in operational settings. Therefore, the focus was on PT across national cultural boundaries (e.g., when negotiating with a local leader in Afghanistan). However, the question of how IPT is different from PT within one's own culture continually emerged during discussions within the team and with other researchers. According to this framework, a critical difference is the importance of sensemaking processes in intercultural situations to develop a working understanding of the target and target group. While some level of sensemaking is required in intracultural PT in order to create a working understanding of the idiosyncrasies of the target based on previous interactions with the target, intracultural sensemaking processes are likely to demand less rigor to be useful for PT. It is important to think of inter- and intracultural PT as two ends of a continuum. In addition to the greater importance of sensemaking processes in IPT, the presence of intercultural differences between target and observer also limits the number of processes that are useful to the observer. For example, projection is likely to be of little use for accurate PT when the target's culture is drastically different from the observer's.

This effort focused on military deployments and IPT during interactions with foreign nationals. However, more generally IPT can occur independently of geographical or national boundaries. The defining characteristic of IPT, based on the proposed framework, is the extent to which the target's culture or subculture is less familiar to the observer, more complex or difficult to learn, and more different from the observer's own culture, regardless of national cultural boundaries. Given the diversity (i.e., subcultures) and the presence of nonnatives within virtually any culture, some level of cultural sensemaking is also involved when one interacts with individuals with whom one shares national identity.

**Operational relevance of intercultural perspective taking.** Another recurrent theme with regards to the concept of IPT was the extent to which the application of the IPT product to predict a target's behavior or guide one's actions is part of IPT. Clearly, operational relevance of IPT depends on the extent to which it helps Soldiers perform their roles more effectively and contributes to mission success. Therefore, a framework of IPT in operational settings must include the application of IPT and, when possible, consider the outcome of the incident. Thus, it may be more accurate to refer to the object of this research as intercultural perspective taking and use in operational settings, since the construct proposed in existing 3C models (e.g., McCloskey et al., 2010) implies its usefulness in achieving better outcomes. Both existing research (e.g., Ickes, 1993) and observations during this effort suggest a potential disconnect between desired outcome and quality of PT. Interview data often presented more information about the proximal outcome of the interaction than about the processes followed by the interviewee. For example, data contained instances in which interviewees engaged in IPT and applied the subsequent product to achieve their mission objectives. However, some of the methods used in them (e.g., "shaming" or threatening targets) made raters skeptical about whether a successful outcome was necessarily indicative of high-quality IPT or whether this success in the proximal outcome may have been masking more serious negative consequences in distal outcomes. The assessment of

IPT quality in operational settings must involve looking beyond the actual IPT effort to examine both how the product is applied and the ultimate outcome of the interaction. The framework of IPT proposed here sacrificed the conceptual parsimony afforded by limiting the scope of IPT in order to preserve its relevance to operational settings. While individual research efforts will need to limit their scope to some extent, this framework can provide a common reference for the research and development community to guide and distinguish future efforts.

## **Limitations and Challenges**

**Limitations of interview data.** The findings should be cautiously interpreted given the small sample size. While it is common to have a small sample size when conducting interviews and analyzing qualitative data, the sample of Army personnel for this project does not equally represent all Soldiers and should not be generalized to the overall Army. In addition, the data was limited to what the interviewee stated during the interview, not on full knowledge of the incidents discussed. While interviews in general, and CDM in particular, have been demonstrated to be useful in learning about cognitive processes in operational domains (Crandall et al., 2006), they are perhaps better suited to develop descriptive models of cognitive processes than to assess the quality of those processes in naturalistic settings. When the goal is assessing quality, interviews can play an important role, but, in future efforts, they should ideally be complemented with additional sources of information about the outcome of the incidents and additional perspectives (e.g., the target's perspective or reports describing additional details about the circumstances surrounding the incident).

Another possible limitation of the interview approach was that, even without explicit IPT-related probes during initial incident elicitation, interviewees may have been reporting reflections that did not necessarily occur at the time of the incident. Some of their reflections, therefore, may have been artifacts of the data collection. Interviewees may show a very elaborate understanding of the target based on information gained after the incident and raters may be unable to discriminate what was part of their assessment at the time of the incident. In some instances IPT was not demonstrated during initial incident elicitation and was only manifested after IPT probes, but overall it was not possible to ascertain that events following the incident did not influence the initial incident description.

**Limitations of fragment-level coding of interview content.** Quantitative analyses are often preferred by researchers as a way to support the objectivity of their findings. When one is analyzing qualitative data (i.e., interviews), however, it is important to be aware of how one's choices regarding the assignment of numerical values to these data affect both the results and the interpretation of the analyses. Here, some of those choices made in this research are summarized as a note of caution regarding the interpretation of the data trends presented above. This is particularly important given that researchers often attribute greater objectivity to quantitative findings.

**Occurrence (presence/absence) versus quality (good/bad).** In the coding scheme, the assignment of a "1" in a given theme reflects the rater's judgment regarding the presence or absence of that particular theme in a given excerpt. This presence/absence judgment is based on what the interviewee describes thinking or doing at the time, not on how or how well they are



thinking or doing that. For example, raters can agree that the interviewee describes the target's affective states (e.g., he was ashamed) or attributes these mental states to cultural factors (e.g., it was because of his "Afghan pride"). However, raters do not have access to sufficient information to assess the extent to which those judgments are "good" or "bad". Therefore, while these codes may be useful descriptors of some aspects of what the interviewees thought and did during the incident, fragment-level analyses are, at best, very limited to shed any light into the quality of the interviewee's IPT process or outcome. Furthermore, if the codes were used to assess quality, the use of at least three categories would have probably been necessary and the increased variability may have enhanced the ability to assess relationships.

**Repetitions within and across fragments.** The average codes used in the fragment-level analyses were heavily influenced by parsing decisions and by the data collection method used. The coding scheme required raters to assign either a 1 or a 0 for each fragment, and therefore, did not capture multiple occurrences of a coding theme within fragments. For example, if the interviewee talked about multiple different beliefs of the foreign national within one excerpt, that excerpt would receive a code of 1, just as it would if there were only one mention of the foreign national's belief. In addition, CDM interviews are designed in such a way that the interviewer goes back over parts of the incident multiple times with the interviewee. The average codes for any of the present themes therefore were likely to be inflated as a result of the use of CDM interviews.

**Number of themes and fragment-level coding.** The fact that raters had to code all 485 fragments on 25 different themes encouraged them to adopt a mindset in which they mostly attended to low-level information in the fragments. Reducing the number of themes could have enabled raters to more easily alternate between low-level details of the fragments and seeking high-level, big picture implications of the interview data. Furthermore, the coding was approached exclusively at the fragment level, calculating average codes for each interviewee by averaging the codes across fragments. This choice may have limited some of the encountered phenomena. For example, it is difficult to capture changes in the assessment of a target within a single fragment, but these are often obvious when interviews are examined at the interview level (and were reported by holistic raters).

**Reaching interrater agreement.** In order to ensure that the coding scheme was applied consistently, the two raters engaged in an iterative process involving extensive discussions about how to apply the coding scheme across themes. Because the goal of this process was to reach acceptable levels of interrater agreement, raters purposefully limited the inferences and extrapolations beyond what was explicitly stated. This goal, however, may have sometimes prevented raters from thinking about the meaning of what was happening within the fragment. That is, the need to achieve acceptable levels of inter-rater agreement may have negatively impacted the ability of the raters to engage in processes of exploration and discovery, since agreement at the fragment level became the main focus. It is possible that, in an attempt to follow a rigorous procedure to ensure consistent coding across raters, opportunities for raters to provide more subjective assessments may have been reduced. Fortunately, subjective assessments were still obtained in this project through the discussions among holistic raters, as well as with other members of the research staff who reviewed the data in a less comprehensive manner.

**Limitations of holistic ratings.** Holistic raters showed a different set of limitations. When discussing the rationale behind the codes with the greatest inter-rater discrepancy (i.e., participants 10 and 16 in Table 5), it became apparent that certain aspects of the interviews tended to strongly influence holistic ratings of IPT quality. For example, when an interview described using cultural knowledge to successfully understand and act towards the target, discrepancies were often the result of the rater's level of agreement with the interviewee's methods and their assessment of his/her honesty. Regarding agreement, raters often gave higher ratings when they agreed with the cultural knowledge the interviewee was using (independent of objective accuracy) and whether they agreed with the path of action selected by the interviewee (independent of objective effectiveness). Regarding honesty, some raters assigned lower ratings to an interview when their overall impression was that, for example, the interviewee was arrogant and likely exaggerating his claims. In contrast, other raters assigned a high rating to the same interview based on the belief that the claims were honest.

**Final remarks on limitations and challenges.** In spite of these limitations, fragment-level codes were useful to examine data trends (see Results section). In fact, even without strategically selecting or weighting themes, the aggregate code that was calculated by simply averaging all of the codes across themes turned out to be strongly correlated ( $r = 0.65$ ) with holistic codes assigned by a separate set of raters. Furthermore, when the relationships between IPT themes and potential influences of PT was examined, the results showed trends that, overall, were consistent with the qualitative impressions of holistic raters. While fragment-level and holistic analyses each have their limitations in isolation, finding convergent results across methods overcomes some of the limitations of each method when used in isolation. Both fragment-level and holistic analyses were considered when developing the proposed framework.

### **Intercultural Perspective Taking in Operational Settings: The Way Forward**

The primary objective of this report was to provide a framework to facilitate understanding of IPT in operational settings. This framework can promote shared awareness of IPT research challenges and opportunities, as well as guide future research and development efforts. The framework suggests at least three lines of research that show promise: framework refinement and extension, IPT outcome link research, and training and assessment development.

Regarding IPT framework refinement, the present research yielded an effective methodology to investigate how individual, relational, and situational variables influenced IPT, as well as a preliminary investigation of this issue. A tentative picture of the variables that were hypothesized to influence activation of IPT was presented (see Figure 2 for a depiction of some of these influences). One potential course of research would involve systematically varying key factors identified in this research (such as threat to personal safety) and observing how these variations impact IPT activation. Such an experiment would uncover situations in which Soldiers are more or less likely to engage in IPT. Furthermore, unveiling the influences of other components of the framework (e.g., processes, application) will require significant additional research. For example, different sensemaking and PT processes are likely to be influenced differently by these variables (e.g., see the similarity contingency model; Ames, 2004). A

promising direction of future research involves further investigating these links. This information could then inform training and assessment methods.

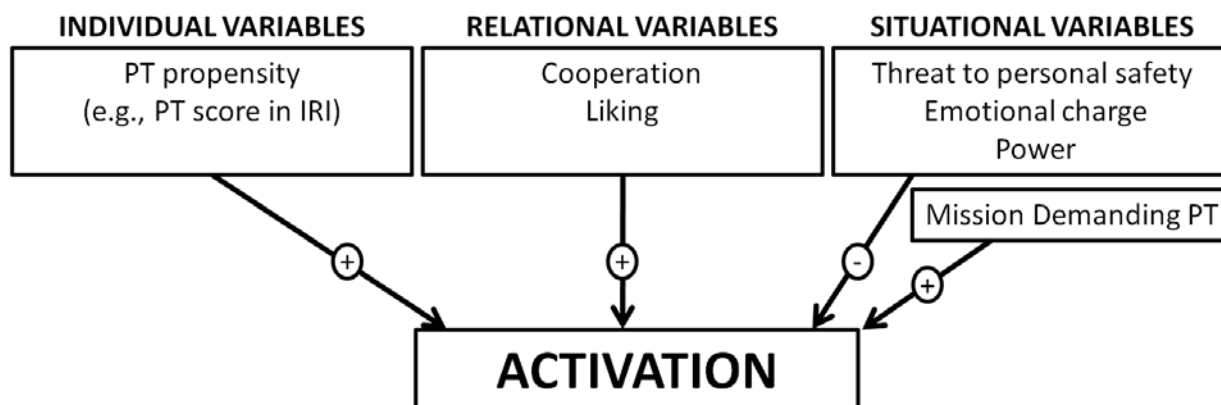


Figure 2. Potential relationships between influencers and IPT activation.

A second promising line of research would involve an investigation of when and where IPT truly supports military personnel in achieving mission objectives. It is tempting (and perhaps politically correct) to assume that engaging in IPT is something that our warfighters should do at all times, in all encounters with foreign nationals. But are there times when mission effectiveness can be adversely affected by IPT? Effectiveness in cross-cultural environments has been related to three domains: personal – the psychological and physical adjustment to living in a novel cultural environment, job performance – the completion of mission objectives, and interpersonal – the ability to build and maintain relationships with foreign nationals (Abbe, Gulick, & Herman, 2007). Future research should investigate the extent to which IPT actually improves Soldier effectiveness in these three domains.

The framework also highlights the need to consider whether a Soldier's actions achieved the tactical objectives of the short-term mission (e.g., clear the road of civilians) and also how the Soldier's actions impacted long-term mission objectives (e.g., ensure that the local populace maintains pro-U.S. sentiment) when measuring job performance. For example, consider the scenario (described earlier) in which a Soldier was tasked to clear a road of foreign civilians. While threatening the civilians with weapons achieved the immediate objective of clearing the road, it is possible that it resulted in negative consequences on the longer term (and potentially much more critical) goal of promoting positive U.S. sentiment in the region. Future research attempting to establish a link between IPT and job performance must consider mission effectiveness at proximal and distal outcomes.

In addition to providing suggestions for future research, the framework developed in this effort has significant implications for the design and development of training and assessment tools. The second line of follow-on research mentioned above is needed to clarify when and how IPT would be most useful for operational effectiveness. However, both previous research and the empirical data collected during this effort support the idea that the ability to engage in accurate IPT with foreign nationals during deployments can generally yield significant, positive outcomes in terms of mission success, both immediately and in the longer term. The framework presented

above can guide the development of effective programs to specifically assess, and/or promote the occurrence and quality of IPT. By considering operational IPT in terms of its constituent activators, components, and outcomes as described in the framework, one can see how sensemaking and PT subprocesses can be targeted. Future efforts to operationalize the results of this research might consider how to provide opportunities for deliberate IPT practice and guided reflection. Having a range of situations that hinder or facilitate IPT can allow trainers to scaffold the learning experience, supporting learners along a development curve. For example, IPT training could begin with a trainee in a simulated environment working with an English speaking nongovernmental organization during a humanitarian relief effort with simple tasking. As the trainee progresses, scenarios could become more challenging by incorporating situational variables that research has shown to negatively impact IPT such as time pressure. Further, feedback on IPT accuracy, in terms of the target's actual perspective, would be invaluable components of IPT training programs as well. By using the IPT framework as a starting point, researchers and developers can clarify specifically what aspects of IPT are being addressed for assessment and training, and can better generate expectancies on envisioned outcomes.

## **Conclusions**

This effort began with a review of existing research and models of intracultural PT in order to learn from the vast literature and apply those lessons to enhance understanding of IPT in operational settings. After completing empirical work to complement the lessons from the literature, the lessons learned were synthesized into a framework for understanding IPT in operational settings. This framework consists of six components (Activation, IPT Processes, Target's Perspective, Application, Outcomes, and Reflection), which will allow researchers to parse IPT in operational settings in order to better understand it. For example, the framework clarifies which aspects make IPT different from PT (e.g., IPT requires more rigorous sensemaking processes and less PT processes are available for use) and which components are most important to investigate how individuals use IPT and when it matters in operational settings. Furthermore, the framework can guide future research exploring the impact of individual, relational, and situational variables on PT by clearly articulating some of the concerns and distinctions of which researchers should be aware.

As is often the case in these types of efforts, the final product raises more questions than it answers; in fact, this is a desired outcome as it can generate continued interest in investigating IPT. However, this framework also provides a better understanding of IPT in operational settings than was available at the outset of the effort – a lens through which to dissect natural occurrences of IPT in operational settings and a mechanism that can uncover promising directions for future research in the field.

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## APPENDIX A: Interview Protocol

### Background Information About the Interviewee

Ask the interviewee about his or her experience in the Army and the number of deployments to date. For each deployment, ask questions such as:

- To which country/region was the deployment?
- Had you been to the country/region before? If yes, how many times? For how long?
- How long was the deployment?
- What types of tasks or missions were you responsible for?
- During the time you were deployed in [country], how much did you interact with members of the local community, military, police, or any other local nationals? (Get an idea of whether interactions with local nationals were inexistent, occasional, on a weekly basis, on a daily basis, etc.)
- Were your interactions with local nationals (if any) limited to professional interactions or did you also get opportunities to engage in more leisurely, social interactions?

Try to get a picture of the level of interaction with local nationals for all previous deployments, so that it can inform the incident elicitation phase.

### Incident Elicitation and Selection

- Can you think about a time, in [country], when you were interacting with local nationals (e.g., civilians, local military personnel, local officials) and **the interaction was particularly challenging?**

*If you need to reframe the question or elaborate, refer to ideas such as:*

- *Maybe the interaction did not go as you initially expected and you had to ‘think on your feet’ to be able to achieve your objectives?*
- *Maybe your impression of the interaction was positive but you learned later about unexpected long-term consequences of that interaction that were surprising to you?*
- *Maybe events did not turn out as you had anticipated and you were surprised by the outcome?*

If possible, ask interviewees to provide a very brief description of two or three incidents so you have a set of potential candidates from which to choose. As the interviewee describes these candidate incidents, listen for instances in the description of the event where the interviewee either appeared to engage in perspective taking or the opportunity to engage in perspective taking appeared to be there.

### Background and Timeline of the Incident

Once an incident is selected, try to gather additional information about the circumstances surrounding the incident and a timeline of events. Sample probes may include:

- In a few minutes, describe for me what happened during the incident, from beginning to end (quick run through).
- When did this incident happen during your deployment? For how long had you been in the country at the time of the incident?
- From the beginning of the incident to its conclusion, how long do you think it took?
- What were you doing in [country] at the time? What was your mission when the incident happened?
- What was your role during the incident?
- Who else was involved in the incident? What were their roles?

### **General Deepening – No Explicit Perspective Taking Probes**

Try to get a more complete picture of the incident specifics, emphasizing how the interviewee assessed what was happening and made decisions about what to do.

- How long would you say it took you to assess what was happening during the incident? Was it in the order of seconds, minutes, hours, days?
- How did you make that assessment? Describe the pieces of information in the environment or elsewhere that hinted you and helped you assess what was happening at the time. Where were you directing your attention?
- Was your assessment the same throughout the incident? If not, how did it change?
- Did you take any actions to evaluate the extent to which your assessment was correct? If you did, what did you do?
- How confident were you that your assessment was accurate?
- What sorts of things did you consider to make that assessment? Which prior experiences influenced your assessments?
- Did your assessment influence any of the things you did or say afterwards? How?

During this deepening phase, make sure to listen for signs of perspective taking. For example, pay attention to instances in which the interviewee mentions what local nationals were thinking, how they were feeling, etc.

### **Perspective Taking Probes**

Revisit the incident with the interviewee. Ask the interviewee to elaborate on those instances in which you identified the potential for perspective taking. For example,

- When you said [*the local national*] did [*the action*], what do you think he or she was thinking?
- Do you have an explanation for why [*the local national*] did [*the action*]?
- Why do you think [*the local national*] was perceiving/feeling/thinking the way he or she was? Describe the things you were paying attention to during the incident that helped you make this assessment.
- During this event, what do you think [*the local national*] was thinking about? What would you say [*the local national*] was paying most attention to?



- If you had to guess, how do you think [*the local national*] was interpreting your behavior? If they were explaining the incident to another person, what do you think they would say?
- What was [*the local national*] trying to accomplish during the incident? How do you know that? What seems most important to [*the local national*] in this situation? Why do you think this was important to him or her?
- I have been asking your opinion about how [*the local national*] was thinking and feeling during the incident. When you said [*quote from interviewee*], was that something that you considered at the time of the incident? Or is it something that you only considered when examining the incident with the benefit of hindsight? If you were thinking that at the time, how did it affect how you approached the situation?

### Probes About Candidate Influences

To the extent that these have not been already answered during the previous phases of the interview, make sure you ask:

- During your interactions with [*the local national*], did you use an interpreter or communicate with him or her directly?
- Had you interacted with [*the local national*] before this situation? How many times? For how long had you known [*the local national*]?
- How well did you get along with [*the local national*]? Would you say that you ‘liked’ him or her? In different circumstances, would it be somebody you would want to be ‘friends’ with?
- Did you have the ultimate decision authority during the incident? If not, who did?
- In your opinion, how well respected by U.S. Forces would you say [*the local national*] was?
- How about the people in [*country/region*], did they respect [*the local national*]?
- Would you describe [*the local national*] as cooperative?
- Did you understand the role/job of [*the local national*] in this situation? Explain what his/her role was.
- How was your workload at the time? Were there other tasks or thoughts competing for your attention?
- How would you describe your general fatigue level at the time?
- How about your stress level at the time?
- Would you say you were emotionally charged at the time of the incident?

### Close-Out Questions

- Had you ever interacted with [*natives of country/region*] before this incident? How much/often?
- How would you describe your familiarity with the culture and history of the region?
- Looking back at the situation, has your understanding of what happened then changed/improved since that time?

- With the benefit of hindsight, is there anything you would change about handling this or a similar situation in the future?

## APPENDIX B: Deployment/Cultural Experience

**Please fill out the following demographic information to the best of your knowledge.**

### BASIC INFORMATION

Age: \_\_\_\_\_ Grade: \_\_\_\_\_ Gender: \_\_\_\_\_ MOS: \_\_\_\_\_ Years of Service: \_\_\_\_\_

ASVAB General Technical Score (if known): \_\_\_\_\_

Are you Spanish/Hispanic/Latino?

- ☐ No, Spanish/Hispanic/Latino  
☐ Yes, Mexican, Mexican-American, Chicano, Puerto Rican, Cuban, or other Spanish/Hispanic/Latino

2. What is your race? (*Mark one or more races to indicate what race you consider yourself to be*)

- ☐ White  
☐ Black or African American  
☐ American Indian or Alaska Native  
☐ Asian (for example, Asian Indian, Chinese, Filipino, Japanese, Korean, or Vietnamese)  
☐ Native Hawaiian or Other Pacific Islander (for example, Samoan, Guamanian, or Chamorro)

### DEPLOYMENT HISTORY

List your **DEPLOYMENTS** below as well as their duration. On the far right column, rate the amount of cultural interaction you had with foreign citizens, government leaders, and NGOs during each deployment from 1 to 5. See below for rating levels and examples:

- 1 – No Interaction (e.g. Rarely left post and only interacted with other Americans)  
2 – Little Interaction (e.g. Interacted a little with foreign citizens when shopping off post)  
3 – Moderate Interaction (e.g. Worked with foreign military on a few projects)  
4 – Heavy Interaction (e.g. Worked daily with foreign military Soldiers)  
5 – Constant Interaction (e.g. Daily focus on building relations and working with foreigners)

Location (region/country)	Duration/Timeframe	Cultural Interaction
<b>Example:</b> Baghdad/Iraq	16 months/June08-Oct09	1 2 3 4 5
		1 2 3 4 5
		1 2 3 4 5
		1 2 3 4 5
		1 2 3 4 5

Do you speak any **LANGUAGES** other than English?

If so, please list them below and select a level of fluency based on the table below.

0	No practical understanding of the spoken language
0+	Sufficient comprehension to understand a number of memorized utterances in areas of immediate needs.
1	Sufficient comprehension to understand utterances about basic survival needs and minimum courtesy and travel requirements in areas of immediate need or on very familiar topics, can understand simple questions and answers, simple statements and very simple face-to-face conversations in a standard dialect
1+	Sufficient comprehension to understand short conversations about all survival needs and limited social demands.
2	Sufficient comprehension to understand conversations on routine social demands and limited job requirements.
2+	Sufficient comprehension to understand most routine social demands and most conversations on work requirements as well as some discussions on concrete topics related to particular interests and special fields of competence
3	Able to understand the essentials of all speech in a standard dialect including technical discussions within a special field
3+	Comprehends most of the content and intent of a variety of forms and styles of speech pertinent to professional needs, as well as general topics and social conversation.
4	Able to understand all forms and styles of speech pertinent to professional needs.
4+	Increased ability to understand extremely difficult and abstract speech as well as ability to understand all forms and styles of speech pertinent to professional needs, including social conversations
5	Comprehension equivalent to that of the well-educated native listener

Language	Fluency Level
Example: French	0 0+ 1 1+ 2 2+ 3 3+ <u>4</u> 4+ 5
	0 0+ 1 1+ 2 2+ 3 3+ 4 4+ 5
	0 0+ 1 1+ 2 2+ 3 3+ 4 4+ 5
	0 0+ 1 1+ 2 2+ 3 3+ 4 4+ 5
	0 0+ 1 1+ 2 2+ 3 3+ 4 4+ 5

Describe any cultural experiences you have had outside of your military deployments (e.g., lived abroad, first generation American, bi-lingual parents, naturalized citizen born in a country other than the United States, etc.)

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## APPENDIX C: Interpersonal Reactivity Index

The following statements ask about your thoughts and feelings in a variety of situations. For each item, show how well it describes you by choosing the appropriate number on the 5-point scale at the top of the page

When you have decided on your answer, fill in the number in the blank next to the item. **READ EACH ITEM CAREFULLY BEFORE RESPONDING.** Answer as honestly and as accurately as you can.

### ANSWER SCALE:

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>DOES NOT DESCRIBE ME WELL</b>				<b>DESCRIBES ME VERY WELL</b>

- \_\_\_ 1. I often have concern for people less fortunate than me.
- \_\_\_ 2. I sometimes find it difficult to see things from the “other guy’s” point of view.
- \_\_\_ 3. Sometimes I don’t feel very sorry for other people when they are having problems.
- \_\_\_ 4. I try to look at everybody’s side of a disagreement before I make a decision.
- \_\_\_ 5. When I see someone being taken advantage of, I feel kind of protective towards them.
- \_\_\_ 6. I sometimes feel helpless when I am in the middle of a very emotional situation.
- \_\_\_ 7. Other people’s misfortunes do not usually disturb me a great deal.
- \_\_\_ 8. If I’m sure I’m right about something, I don’t waste much time listening to other people’s arguments.
- \_\_\_ 9. When I see someone being treated unfairly, I sometimes don’t feel very much pity for them.
- \_\_\_ 10. I am often quite touched by things I see happen.
- \_\_\_ 11. I believe that there are two sides to every question and try to look at them both.
- \_\_\_ 12. I would describe myself as a pretty soft-hearted person.
- \_\_\_ 13. When I’m upset at someone, I usually try to “put myself in his shoes” for a while.
- \_\_\_ 14. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

## APPENDIX D: Scoring Notes for Candidate Differences

Individual Variables	Scoring Notes and/or Conversion to Numerical Values
Age	Reported as numerical value in the questionnaire
Grade	SGT (1), SSG (2), SFC (3), MSG (4), SGM/CSM (5), 1LT (6), CPT (7), MAJ (8), LTC (9)
Years of Service	Reported as numerical value in the questionnaire
PT Propensity (IRI Score)	Calculate from responses in the questionnaire
Cognitive Ability (ASVAB)	Reported as numerical value in the questionnaire
Gender	Male (0), Female (1)
Number of Prior Deployments	Count how many deployments were reported in questionnaire
Total Number of Months Deployed	Count the total number of months across all deployments reported in the questionnaire
Number of Foreign Languages Reported	Count how many languages were reported in the questionnaire
Foreign Languages Fluency	Count how many languages were given a fluency score of more than 2 (out of 5) in the questionnaire
Other Cultural Experiences?	None reported (0), At least one reported (1)
Number of Months in Country	Interview question: 'Had you been to the country/region before? If yes, how many times? For how long?'
Familiarity w/ Culture and Country	Interview question: 'How would you describe your familiarity with the culture and history of the region?' Not familiar (0), Somewhat familiar (1), Very familiar (2)
Prior Interaction with Natives in country	Interview question: 'Had you ever interacted with [ <i>natives of country/region</i> ] before this incident? How much/often?' None at all (0), Limited interaction (1), Extensive interaction (2)
Relational Variables	Scoring Notes and/or Conversion to Numerical Values
Cooperative	Interview question: 'Would you describe [ <i>the local national</i> ] as cooperative?' No (0), Yes (1)
Subjective Assessment of Relationship	No explicit probe, judge based on transcript. Bad (0), Neutral (1), Good (2)
Target Liking	Interview question: 'How well did you get along with [ <i>the local national</i> ]?' Would you say that you 'liked' him or her?' Didn't like/didn't get along (0), Indifferent (1), Really liked (2)
Prior Interaction with Target	Interview question: 'Had you interacted with [ <i>the local national</i> ] before this situation? How many times? For how long had you known [ <i>the local national</i> ]?' Number of months
Understand role of Target	Interview question: 'How well did you understand what this person's job/role/function(s) was within this situation?' Didn't understand (0), Somewhat understood (1), Understood well (2)

Situational Variables	Scoring Notes and/or Conversion to Numerical Values
Threat to Personal Safety	Judge the extent to which the personal safety of the interviewee was threatened during incident. No threat (0), Minimal threat (1), High threat (2)
Emotional Charge	Interview question: ‘Would you say you were emotionally charged at the time of the incident?’ Not at all (0), Slight emotional charge (1), Strong emotional charge (2)
Level of Stress	Interview question: ‘How would you describe your general stress level at the time?’ Below average (0), About average (1), Above average (2)
Level of Fatigue	Interview question: ‘How would you describe your general fatigue level at the time?’ Below average (0), About average (1), Above average (2)
Competing Tasks (multitasking)	Interview question: ‘How was your workload at the time? Were there other tasks or thoughts competing for your attention?’ No other task (0), Other minor tasks, but this was the main task (1), This was secondary, not the main task (2)
Decision Authority	Interview question: ‘Did you have the ultimate decision authority during the incident? If not, who did?’ Participant had no decision authority (0), limited decision authority (1), complete decision authority (2)
Respected by U.S. Forces	Interview question: ‘In your opinion, how well respected by U.S. Forces would you say [ <i>the local national</i> ] was?’ Not respected at all (0), Intermediate respect (1), High respect (2)
Respected by Afghans	Interview question: ‘How about the people in [ <i>country/region</i> ], did they respect [ <i>the local national</i> ]?’ Not respected at all (0), Intermediate respect (1), High respect (2)
Interpreter Use	Interview question: ‘During your interactions with [ <i>the local national</i> ], did you use an interpreter or communicate with him or her directly?’ Directly/No Interpreter (0), Interpreter (1)